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Hawaii Medical Journal

CONTENTS

Editorials: 6
Our New Editor
Doris R. Jasinski, M.D.
Credo
J.I.Frederick Reppun, M.D.
Inconsistencies in Public Attitudes
J.I.F. Reppun, M.D.
More on Cost Containment vs. Quality
J.I.F. Reppun, M.D.
Letter to the Editor 8
Jerrold M. Michael, Sc.D., D.P.H.
Medicaid Recipient Lock-In Program 9
Florence J. Chinn, M.D.
Letter to the Editor 18
Handicapped Physicians
Living Wills and Dying in Hawaii 20
Lawrence L. Heintz, Ph.D.
Marijuana Update 24
Clare Sprague, M.D.
Continuing Medical Education 36
Index to Hawaii Medical Journal, Volume 43, 1984 37

HAWAII MEDICAL ASSOCIATION
1856

Strong on results.



before Otoscopic view of tympanic membrane in a patient who did not respond to ampicillin

after Same patient after ten days of Bactrim (trimethoprim and sulfamethoxazole/Roche) therapy

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References: 1. Klimek JJ *et al: J Pediatr* 96:1087-1089, Jun 1980. 2. Schwartz RH *et al: Rev Infect Dis* 4:514-516, Mar-Apr 1982. 3. Cooper J, Inman JS, Dawson AF: *Practitioner* 217:804-809, Nov 1976. 4. Antibiotic Sensitivity Report, Winter 1983 BAC-DATA Medical Information Systems, Inc. 5. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 6. Wormser GP, Keusch GT, Heel RC: *Drugs* 24:459-518, Dec 1982. 7. *Med Lett Drugs Ther* 23:93-95, Oct 30, 1981.

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Precautions: *General:* Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function. Bactrim may prolong prothrombin time in those receiving warfarin; reassess coagulation time when administering Bactrim to these patients.

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Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, hepatocellular necrosis, diarrhea, pseudomembranous colitis and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L.E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

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Children: Recommended dosage for children with urinary tract infections or acute otitis media—8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses for 10 days. Use identical daily dosage for 5 days for shigellosis.

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Editorials

Our New Editor

Since Dr. Harry L. Arnold, Jr., bowed out as "Editor" of the HAWAII MEDICAL JOURNAL and became "Founding Editor," it became necessary to choose someone to catch the flak and be the person with whom the buck stops on issues pertaining to the JOURNAL.

In light of his World War II experiences in the South Pacific, where he learned how to behave in combat, and because of his long community service in Hawaii ever since — both as a physician and as an active citizen — and because of his undeniable skill in putting things many of us are thinking into words in his frequent editorial comments in these pages, Dr. J.I. "Fred" Reppun has been selected for the buck-stopping job. No combat pay is included!

Best wishes to him in his new shoes (and hat — make that hard hat) (and flak jacket)!

Doris R. Jasinski, M.D.
Managing editor

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Credo

It will be impossible to fill Harry L. Arnold Jr.'s size 40 shoes!

I think I might try to preempt his usual seat at the meetings of the HMA publications committee, close to the door and as far away as possible from the committee chairman's seat, so as to be able to absorb Harry's aura of wisdom, wry humor, and uncompromising purity in the use of the English language. With a lot of help from my colleagues on the committee and the HMA staff, I might be able to make a go of it.

What will be my credo? I shall try to implant firmly in the minds of the leaders of the HMA that the HAWAII MEDICAL JOURNAL is **the** organ of the Association; and,

(1) That the HMJ should be a free and easy medium of communication between the leadership of the HMA and its members;

(2) That members will look forward to the periodic arrival of the JOURNAL and actually **read**, or at least scan it, for:
(a) Well-executed and well-written scientific articles of local interest (but not necessarily of local origin);
(b) "News and Notes" and lots of good humor (a little ribald on occasion, as Chaucer or Shakespeare would have liked it for their audiences of both high and low degree), about the doings and don'ts of members and their families;
(c) Serious communications from our HMA leaders on matters of socio-medico-economic import;
(d) Editorials emanating from the presumably lucid brains of the editorial staff; or guest editorials from any member, for that matter; letters-to-the-editor will be very welcome, of course, even highly critical ones;
(e) News of meetings and doings of the specialty and other societies; and
(f) All of the above **only** as space permits, as determined by our expert managing editor in conjunction with our publisher.

In addition, I will make a plea to the publications committee, to the commissioner on membership services and to the president of HMA to allow the editor: (a) to sit, ex-officio, on the HMA Council, and (b) to become the ombudsman for the membership of the HMA so as to be able to answer to the query: "Where's the beef?"

How is that for a start?

J.I. Frederick Reppun, M.D.
Your new Editor (pro tem)

Inconsistencies in Public Attitudes

Blendon and Altman (not M.D.s) of the Robert Wood Johnson Foundation (a philanthropic foundation interested in exploring alternative health-care systems) have a thought-provoking article in the New England Journal of Medicine, August 30, 1984, Vol. 311, No. 9, page 613 that they have titled, "A Lesson in National Schizophrenia." It is a long article that most physicians may not have time to read. However, the pearls of fact and conclusion deserve the attention of the modern practicing physician in a world expanding with DRGs, HMOs, PPOs, PPS, and now PL 98-369. Unfortunately, it may never come before the eyes of officials in government.

First of all, some interesting statistics: HMOs now take in some 7% of the population. Health care in 1982 cost $322 billion and is projected to increase to $1.9 trillion by the year 2000. "This means an average increase of $50 billion a year and a doubling every six years."

This year the U.S. will spend $1,500 per person for health care, as compared with Japan's $500 and Great Britain's $400, which indicates to us that Americans are getting Mercedes-type medicine!

Blendon and Altman provide an analysis of the views of the general public through a study of 15 — repeat 15 — national public opinion polls and other surveys, a rather remarkable compendium of data that surely must eliminate many biases and disparities inherent in each one.

Reality 1. Everyone seems to grant that rising costs are the

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No. 1 concern in health care, *but* health-care costs rank only 7th in the list of the 10 most important concerns of the people of this country!

Reality 2. Despite being disturbed by the rising costs of hospitalization and of visits to a physician, Americans are not particularly concerned about the increasing share of the nation's resources being devoted to health care. In fact, "two out of three Americans feel that federal spending for health care should be increased, and 59% favor some form of national health insurance," even if it means paying higher taxes.

Reality 3. There is widespread public discontent with the nation's health-care system, but this is offset by a pervasive satisfaction with personal medical care: "My doctor is not too interested in making money," say 72% of Americans; "he/she spends enough time with me," say 77%; and "**my doctor's fees are usually reasonable**" (emphasis ours/Ed.), say 71%. The major complaint expressed by the public was against the degree of out-of-pocket expenses not covered by insurance.

Reality 4. Only 8% of Americans "give high priority" to enactment of "socialized medicine" or some form of national health insurance. The American people "desire to maintain personal health-care arrangements." Only 33% would agree to go to physicians, listed by insurance companies, who would make no charge above the covered amount (HCFA, please note). However, the public is quite enthusiastic (66%) about requiring low-income people to use less costly clinics or HMOs. Still, the general public favors cost-containment approaches "as improving the quality of care and the quality of life." To this we respond with wonder: Why doesn't the public understand that, barring the obvious benefits from increased efficiency overall, cost-containment translates inevitably into benefit-reduction? The government's euphemisms to the contrary notwithstanding, this means a decline in the quality of medical care.

Reality 5. "The views of practicing physicians are more influential with the public than the opinions of government officials, business and labor leaders," say Blendon and Altman. "Survey results indicate that Americans place more confidence in the leadership of American medicine than in any other leadership group."

The two researchers conclude: "Public-opinion surveys show that, more than ever before, Americans want the problem of rising health-care costs addressed. However, they are unwilling to support the adoption of any solution that would produce a dramatic change in their own medical-care arrangements."

We recommend that the interested reader go to the original article.

J.I. Frederick Reppun, M.D.

More on Cost Containment vs. Quality

As a follow-up on the previous editorial, "Inconsistencies in Public Attitudes," we were struck by a pertinent analysis of the trend of medical care in our modern society by Donald O. Nutter, M.D., of Emory School of Medicine in Atlanta, Ga., writing — again in the New England Journal of Medicine, October 14, 1984 — in "Sounding Board." Dr. Nutter gave emphasis to our contention that the current push for cost containment is bound to be detrimental to the quality of care. (An attempt to have the HMA adopt a resolution to this end at the 128th annual meeting on Kauai came to nought.)

Dr. Nutter summarized the 1960s and the 1970s as the period when government — representing the people of this country — stimulated an increase in access by the "gap group" to health care, with particular emphasis on promoting more health manpower: The education and training of more primary care physicians.

We are now in the 1980s and some evidence of success of this policy is manifested by the fact that "low income and minority groups have substantially increased their use of health services." However, within this present decade, the government's policy of cost containment, within the framework of increased competition between providers (a resultant surplus of physicians presumed and anticipated), seems to have backfired, to the detriment of that segment of our society that depends on public assistance. In 1982, 10% of the U.S. population, or about 24.5 million people, had no "usual source of health care," and about 28 million "had difficulty in obtaining care from the system." The percentage of families who "needed care but did not or could not obtain it" jumped from 6% in 1982 to 14% in 1983.

Dr. Nutter expresses his concern that the current preoccupation with cost containment ignores the issues of equity and quality in health care.

As a part of this picture, the development of health care along corporate lines in concert with rapid growth of for-profit entities may indicate a trend towards a system that would exclude from access the "underinsured, including Medicare and Medicaid recipients." Both the quality and quantity of health care services will be adversely affected for both private and public programs, says Nutter.

The tendency will be, on the part of physicians and hospitals, to select the patients "who require a low level of care, a short stay, or both." Besides being detrimental to the well-being of the uninsured patient and to the one dependent on public assistance (which is already in process of being reduced), even the insured patients "who have complex medical problems, or who require recurrent or extensive hospitalization, etc., may encounter rationing of care." Corporate organizations will be more interested in the generation of profits and thus providing motives for "patient skimming" and to discontinue needed but cost-ineffective services. Dr. Nutter summarizes in this way: "In other words, the number of uninsured (and underinsured) would escalate and the rationing of care on the basis of ability to pay would become widespread."

Nutter makes an important philosophical point in relation to the ethical practice of medicine: From a point of view that is becoming all too rampant, that "the marketplace" should govern medical practice, rationing based on the ability to pay and decisions to provide service on the basis of profitability are acceptable behavior by the medical profession today. This is at serious odds with our traditional medical ethic of a physician making himself available to his patient irrespective of the latter's ability to pay. We quote Nutter: "Access to care will remain at risk as the corporate, for-profit transformation continues and cost-containment programs become more comprehensive."

Here in Hawaii, we hope that we can depend on the State Health Planning and Development Agency (SHPDA) to keep out the "carpetbaggers." Otherwise, it will be: Harley Street, here we come! The poor can go to the public almshouse on the other side of town and suffer the consequences of being in an un-caring society.

J.I. Frederick Reppun, M.D.



Dear Dr. Reppun:

Congratulations for the well-articulated and informative editorial which appeared in the September 1984 issue of the HAWAII MEDICAL JOURNAL. You've done an excellent job summarzing the meat of Senator Inouye's presentation. I too wish that this kind of substance could have appeared in the local papers.

One side note — the "Pagoda Building" is officially called the Biomedical Sciences Building and it houses the School of Medicine and the School of Public Health. If Terry Rogers gets a copy of your editorial and finds out that you've reclassified it as the School of Medicine Building, I'm sure he'll be up here shortly to throw me out. Come to think of it, he's probably got good reason to do so!

Pono maikai (good health),
Jerrold M. Michael, Sc.D., D.P.H.
Dean and Professor of Public Health
School of Public Health
University of Hawaii

Medicaid Recipient Lock-in Program—
Hawaii's Experience in Six Years

Florence J. Chinn, M.D., Honolulu*

• *In a review of the literature, it was noted that few articles have been published concerning the effect of restricting Medicaid recipients to one primary care physician as a cost-containment measure. This article presents Hawaii's experience with the "lock-in program."*

In 1965 the U.S. Congress created the Medicaid program when it passed Title XIX of the Social Security Act to provide mainstream medical care for all segments of the population.[1] In 1966 Hawaii became one of the first states to establish Medicaid for medically indigent people. Hawaii's program has been and remains one of the most generous and comprehensive assistance programs in the 50 states and 5 jurisdictions. Provided are federally-mandated services as well as optional services. From a modest first-year expenditure of less than $7 million, the Hawaii program grew to $75 million in 10 years. In the past fiscal year (1983-84), expenditures locally exceeded $165 million in spite of a decrease in eligible recipients.

As costs of medical care continue to rise, particularly in institutional expenditures, the unrestricted provision of medical care for all eligible people becomes impossible and fiscally unsound. To continue to provide for the eligible population without cutbacks in services, cost-containment strategies include minimizing provider and recipient misuses, abolishment of fraud and waste, delivery of care in an appropriate but least expensive setting, eliminating use of open-ended or provider-controlled reimbursement for nursing homes and hospitals, minimizing eligibility errors, identifying third-party liability, and maximizing purchasing power.

Much attention has been focused on curbing provider fraud, waste, and abuse, since the establishment of the Office of Inspector General on the national level and Medicaid Fraud Control Units within the states. Efforts also have been successfully directed towards the reduction of inappropriate or overutilization of Medicaid benefits by recipients.[3]

Procedures have been established within the state Medicaid program to identify recipient abusers and control abusive utilization patterns; these procedures are known as the "Lock-in Program." Section 1902(a)(23) of the Social Security Act provides that recipients may obtain services from any qualified provider under "freedom of choice." Section 1902(a)(30) of the Social Security Act requires state Medicaid programs to provide methods and procedures necessary to safeguard against unnecessary utilization of services. Federal guidelines 42 C.F.R. 456.23 require the state Medicaid agency to have a post-payment review system to review recipient utilization profiles and correct misutilization practices. The 42 C.F.R. 440.230(d) stipulates that the state Medicaid agency may place appropriate limits on a service, based on medical necessity or utilization control procedures. Section 1915 of the Social Security Act provides that a state shall not be found out of compliance if it restricts the free choice of providers in accordance with 42 C.F.R. 431.54(e), which provides for the locking-in of recipients found overutilizing Medicaid services, provided the state Medicaid agency gives the recipient notice and an opportunity for a fair hearing before such restrictions are imposed, and the state Medicaid agency assures the recipient has reasonable access to Medicaid services of adequate quality. Hawaii Medicaid Policy Manual Section 17-746-5 covers the issue of overutilization or abuse affecting freedom of choice.

The objective of the lock-in program is to concentrate management of the recipient's care, to provide continuity of care, and to improve quality of care while concurrently reducing Medicaid expenditures for unnecessary or inappropriate services. Identification of abusers is accomplished through the review of recipient profiles by trained technicians, with data analyses by a professional staff. Caseworkers meet with the identified abusers to discuss the issues. Counseling by a professional staff is provided. There is periodic monitoring, with restriction of services to a client if warranted, and provision for a "fair hearing" if requested. Although a number of state Medicaid agencies now have lock-in programs, relatively little documentation has shown monetary savings of these efforts.[4,5,6,7,8]

Hawaii was among the first 6 states to establish a lock-in program within the Department of Social Services and Housing (DSSH). It was initially identified as the "Primary Care Program." Any recipient identified as an abuser was contacted, called in for a conference, and voluntary restriction solicited. Sitting in conference with the identified abuser were the client's caseworker and unit supervisor, the program administrator, a medical consultant of DSSH, and the field service representative. In 1979, mandatory restriction was implemented with adverse action notification instituted.[9] The present lock-in program procedures were refined in April 1980.

How it Works

Hawaii's lock-in program[9] consists of 2 phases: voluntary cooperation and mandatory restriction. An abuser may be restricted to a primary care physician, pharmacy, clinic group, hospital, or any combination. Occasionally, it is necessary to make arrangements for 2 physicians, such as a psychiatrist and an internist, and arrangements are made as to who coordinates medications or how prescriptions will be issued. Providers have an option to refuse this responsibility. Recipients may change primary care providers with approval of the state Medicaid agency's professional staff. Pro-

TABLE 1. Average number of recipients serviced monthly under the Medicaid program in 5 jurisdictions.*

1971	57,382
1975	73,915
1976	84,789
1977	89,481
1978	95,500
1979	93,430
1980	91,920
1981	91,824
1982	87,903
1983	84,399

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viders also have the option to discontinue serving as the primary care physician at any time by informing the restricted recipient and notifying the state Medicaid agency.

The Medicaid professional staff member or caseworker may assist in arranging for another physician to assume case management. Providers are advised to take necessary precautionary measures in their records to avoid possible future abandonment charges by the recipient. Providers are informed of the identified problem(s) with the program abuser and, if requested, they are kept informed of any regressions on periodic reciews.

Identification of Abusers

Program abusers are identified on a post-payment review system by the Surveillance and Utilization Review Unit of the fiscal agent, utilizing computer-generated reports from the Surveillance and Utilization Subsystem (SURS) of the Medicaid Management Information System (MMIS).[10] This sophisticated system is designed to provide a variety of reports which present in detail actual Medicaid expenditures, including averages and deviations, frequency distributions, comparisons of time periods, exceptions to set parameters, and retrieval of quantitative and qualitative aspects of services paid. This system was developed in 1973 with supporting federal funding and specifications published in 1974.

Hawaii's Fiscal Agent's Management Information (FAMI) computer system had been in place since January 1971 and was certified by federal reviewers as conceptually equivalent in design in 1975 with retro-approval to 1972. Thus, Hawaii was among the original 9 states with a certified MMIS system. Parameters established are periodically modified, based on trends or volume of data produced and number of staff members available to do the reviews.

Recipients exceeding set parameters, such as in number of office visits, emergency room visits, use of consultants, laboratory studies, number of prescriptions, amounts of controlled drugs or drugs with street value, etc., are reviewed. Drugs with street value, i.e. with a "demand" for resale to others, in our experience include Valium; narcotics including Percodan, Demerol, Talwin, Percocet-5; codeine in various combinations and forms including drugs with hydrocodone; Darvon, Darvocet-N 100, other Darvon combinations; and Tylox. Tussionex, amphetamines, Quaalude, and Dilaudid had been among the drugs most abused, but, with Medicaid formulary restrictive changes, are no longer major problems.

Under federal requirements in 1982, a state must review 0.01% of new recipient cases per quarter or a minimum of 25 new recipient cases per quarter identified through the SURS post-payment review system. Hawaii routinely exceeds the quota as recipients also are reviewed when reported as possible abusers or identified through other reviews. These reviews are in addition to follow-up reviews of previously identified abusers.

TABLE 2.
Hawaii Recipients Reviewed or Restricted

	7/1/77-12/21/83	7/1/77-7/31/79	8/1/79-12/31/79	1/1/80-12/31/80	1/1/81-12/31/81	1/1/82-12/31/82	1/1/83-12/21/83
No. of recipient cases reviewed	682	144	51	140¶	88¶	143	116
Counseled by caseworkers and/or medical consultant	270	9	26	41	37	82	75
No. of restrictive actions taken**	137	6	26	34	7	19	45
Recipients in compliance following counseling and no further abuse for 1 year	50			3	11	25	11
Counseled and/or restricted or closed inactive‡‡	102	2	3	24	19	33	21

¶ From 6/80-8/81 federal directives targetted principally provider cases.

** Includes recipients who were restricted more than once.

‡‡ Includes recipients who were inactive multiple times or were counseled or restricted more than once.

TABLE 3.
Outcome of Hearings

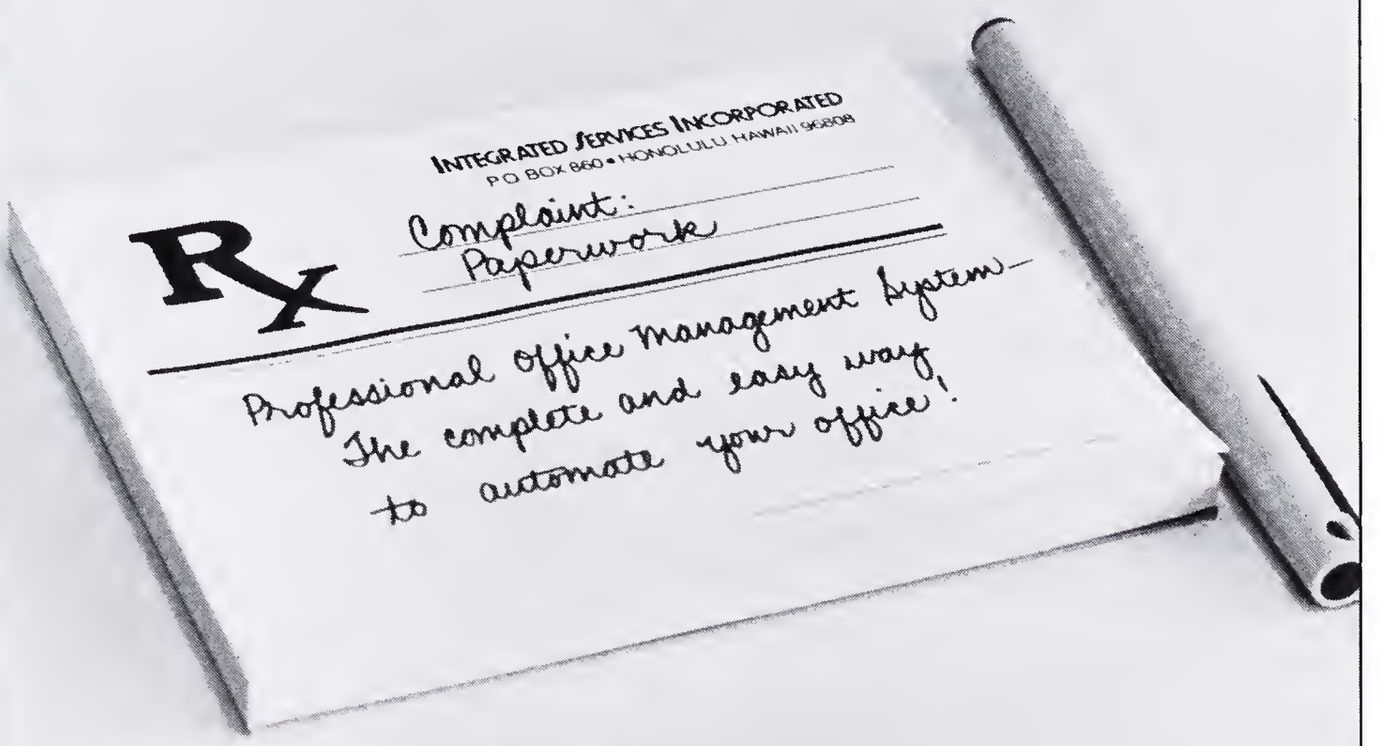
	7/1/77-12/21/83	7/1/77-7/31/79	8/1/79-12/31/79	1/1/80-12/31/80	1/1/81-12/31/81	1/1/82-12/31/82	1/1/83-12/21/83
Closed due to deaths	4				3	1	
Closed due to inactive status	44		19	7	9	9	
Rescinded due to compliance	15		7	6	1	1	
Rescinded due to technical error without request of fair hearing	3				1		2

Criteria for Identification

The following factors, or any combination of these, may be used to select cases for review:

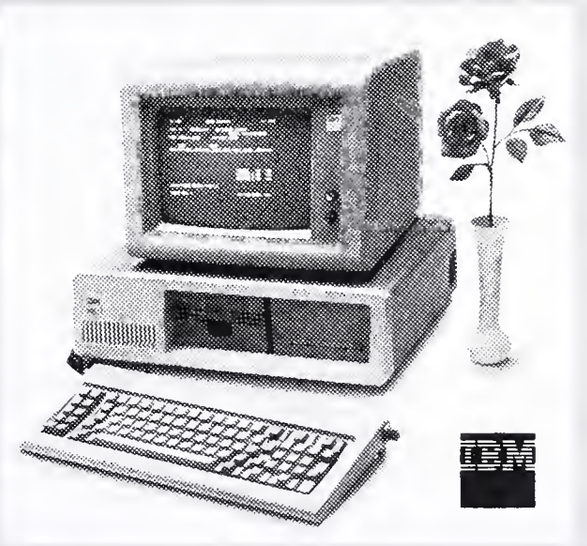
1. Doctor-shopping, when:
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 b. Multiple physicians of the same specialties are consulted for the same or different complaints;
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2. Excessive visits are made to providers in relation to a given illness or condition.
3. Multiple pharmacies issue the same drug when prescribed by the same doctor.
4. Multiple pharmacies dispense the same drug prescribed by different doctors.
5. Excessive quantities of controlled drugs (exceeding Physicians' Desk Reference (PDR) recommended dosages) are issued.
6. Excessive quantities of drugs with street value are issued.
7. Refills of prescribed prescriptions are apparently inappropriate intervals for the diagnosis.
8. Prolonged usage of medications occurs, inconsistent with diagnosis.
9. Drugs which appear inappropriate for the diagnosis are issued.
10. Concurrent usage of drugs with duplication of action occurs.
11. Frequent or duplication of laboratory studies by same or different providers.
12. Frequent or duplication of X-ray studies by same or different providers.
13. Combination of services or drugs which may result in health hazards.

Preliminary Procedure

When cases are referred to the state Medicaid agency, the Program Integrity Unit of the Medical Care Administration office initiates steps for verification:

1. Files are researched for previous work-ups. If none, a folder is started.
2. Case-logging for tracking.
3. Identification of abuse by analyses of data in establishing pattern.
4. Verification of data by retrieving claims, prescriptions, provider contacts for clarification or additional information, obtaining witness statements or any combinations of actions.

Definitive Action

If verification procedures confirm a recipient is an abuser, the following prevails:

1. Recipient is contacted by letter as well as called in for a conference with the caseworker regarding the identified problem(s).
2. Voluntary cooperation is solicited.
3. Professional staff is available for counseling; frequently recipients call to discuss their problems.
4. Providers may be contacted to assist in controlling a problem.
5. Update case review is performed in 6 months, sooner if situation requires it.
6. If 2 consecutive update reviews show no further abuse, the case is closed to be reopened if future data warrant.
7. If there is no compliance or poor response in corrective action, as based on documentations, restrictive action is taken.

TABLE 4.
Restricted Cases

	1/1/80-12/21/83	1/1/80-12/31/80	1/1/81-12/31/81	1/1/82-12/31/83	1/1/82-12/31/83
Requesting fair hearings	11	4	1	0	6
Restrictions upheld by hearing officer	7	3			4
Restrictions rescinded	2	1§§	1¶¶		
Restrictions pending hearings	2				2
Restrictions upheld by fair hearing officer but rescinded by Circuit Court order	1	1			

§§ Department was not informed of the off-Island fair hearing proceedings and lost by default.

¶¶ Restriction was overruled as a result of error when both copies of the adverse action forms were inadvertently sent to the recipient who denied receiving them.

In addition, one restriction was not enforced as the adverse action letter was returned undelivered, forwarding address unknown. The case then became inactive. When the case became eligible again, abuse was again identified and restricted action was taken.

TABLE 5. Sampling of abusers illustrating effectiveness of warning and counseling (savings in dollars).

Case	*Warning* Date	Quarterly base prior to warning	1982 Third Quarter	1982 Fourth Quarter	1983 First Quarter	1983 Second Quarter	1983 Third Quarter	1983 Fourth Quarter
S.H.	12/81	$1,718	$1,104	$ 179	$ 122	$334.47	0	$ 12
M.C.	10/80	3,672	130	673	857	403	0	368
D.S.	9/80	2,411	362	670	885	682	$272	339
H.A.	11/80	1,630	531	755	208	510	364	256
T.S.	5/83	4,543	779	1,154	2,004	997	661	704
D.M.	4/83	1,114					445	264
C.L.	8/83	535					952	202
S.P.	3/82	2,198	1,222	2,160	957	608	247	340
M.J.	6/83	4,878						284
S.H.	7/80	2,395	1,732	1,364	672	826	499	532
S.H.	11/83	1,454					355	309
T.K.	5/82	2,377	600	274	783	522	0	0
M.R.	8/83	3,621						778
Z.C.	5/83	2,605					952	1,112
P.P.	1/82	1,382	682	926	351	614	35	381
V.C.	1/83	1,049					743	71
M.J.	6/83	4,878						284
K.T.	12/80	993	443	694	519	558	244	2,301

Restriction

When an identified abuser is reviewed in 6 months following the initial letter requesting voluntary cooperation, and in the opinion of the professional staff mandatory restrictive action is necessary, the following steps are taken:

1. Subject recipient is notified in writing the basis for the restriction; given the date of effective restriction; cited the applicable Medicaid policy section which was violated; and given 10 working days to designate a primary care provider, who then must inform the Medical Care Administration office of voluntary acceptance of the responsibility in writing as primary care provider. An informed medical consultant is available to discuss the problem. The recipient is given an opportunity for a fair hearing.
2. Recipient's caseworker is informed of

the restrictive action decision and assists in obtaining a fair hearing if the recipient requests it.

3. Fiscal intermediary agent generates identification cards monthly by computer and separates the restricted recipient's identification card from the unrestricted cases so that the necessary information may be entered on the restricted case.
4. Surveillance is maintained on the restricted case. If non-compliance is identified, the recipient and the provider are contacted.
5. Termination of restriction may occur on recommendation of the primary care provider, with concurrence of the DSSH medical consultant. The medical consultant may initiate restoration of full privileges with concurrence of the primary care provider. However, if abuse involves controlled substances or drugs with street value and their continued usage, even though the amounts do not exceed PDR recommendation, restriction is maintained.
6. Periodic monitoring is performed even after restriction has been rescinded.
7. Occasionally the restricted recipient requests a change in primary care physician. This is allowed with the DSSH professional staff's approval and assistance.
8. If a restricted case is closed due to ineligibility, is no longer in the islands, has been incarcerated, or for other reasons, and later becomes active again, the restriction is re-enforced. When a recipient is under restriction, all medical care must be controlled by the primary provider. In an emergency situation, when the primary care provider is not available, other providers may provide the necessary services.

Fair Hearings

If a restricted recipient requests a fair hearing because of disagreement with the DSSH's restrictive action, arrangements are made for a hearing conducted by an attorney with no interest in the case from the Welfare Appeals Office. In the interim, restriction is suspended pending the fair hearing officer's decision. The recipient may be represented by anyone and may choose a staff member of the Legal Aid Society. After the fair hearing is held, the fair hearing officer sends the written opinion to the recipient and the state Medicaid agency. If the decision is in support of the department's action, the state Medicaid agency informs the recipient that a primary care physician must be designated without delay. Caseworker assistance may be requested to expedite action prior to the issuance of the next monthly Medicaid identification card.

Results

Based on available data from July 1,

Continued on page 17

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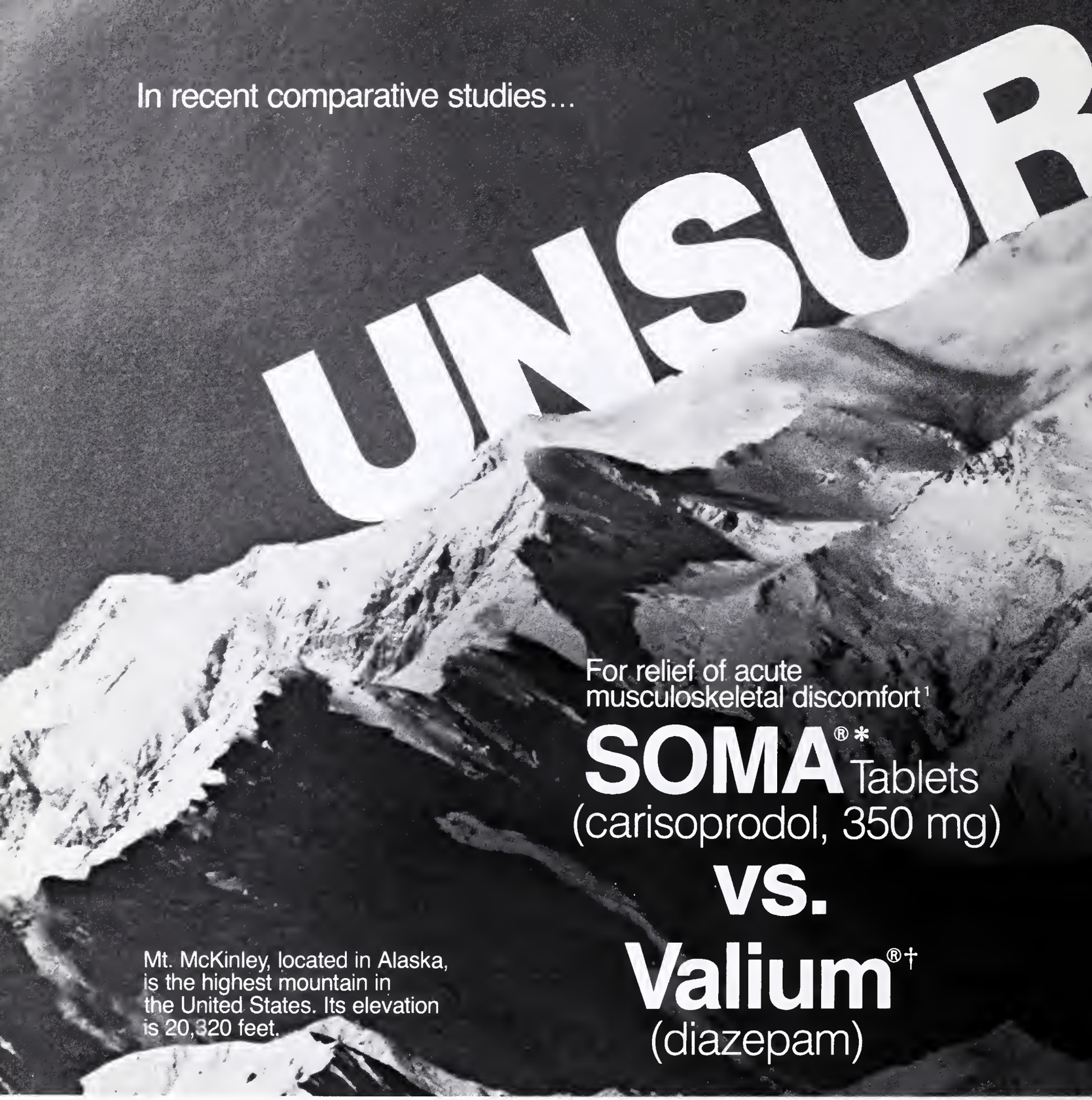
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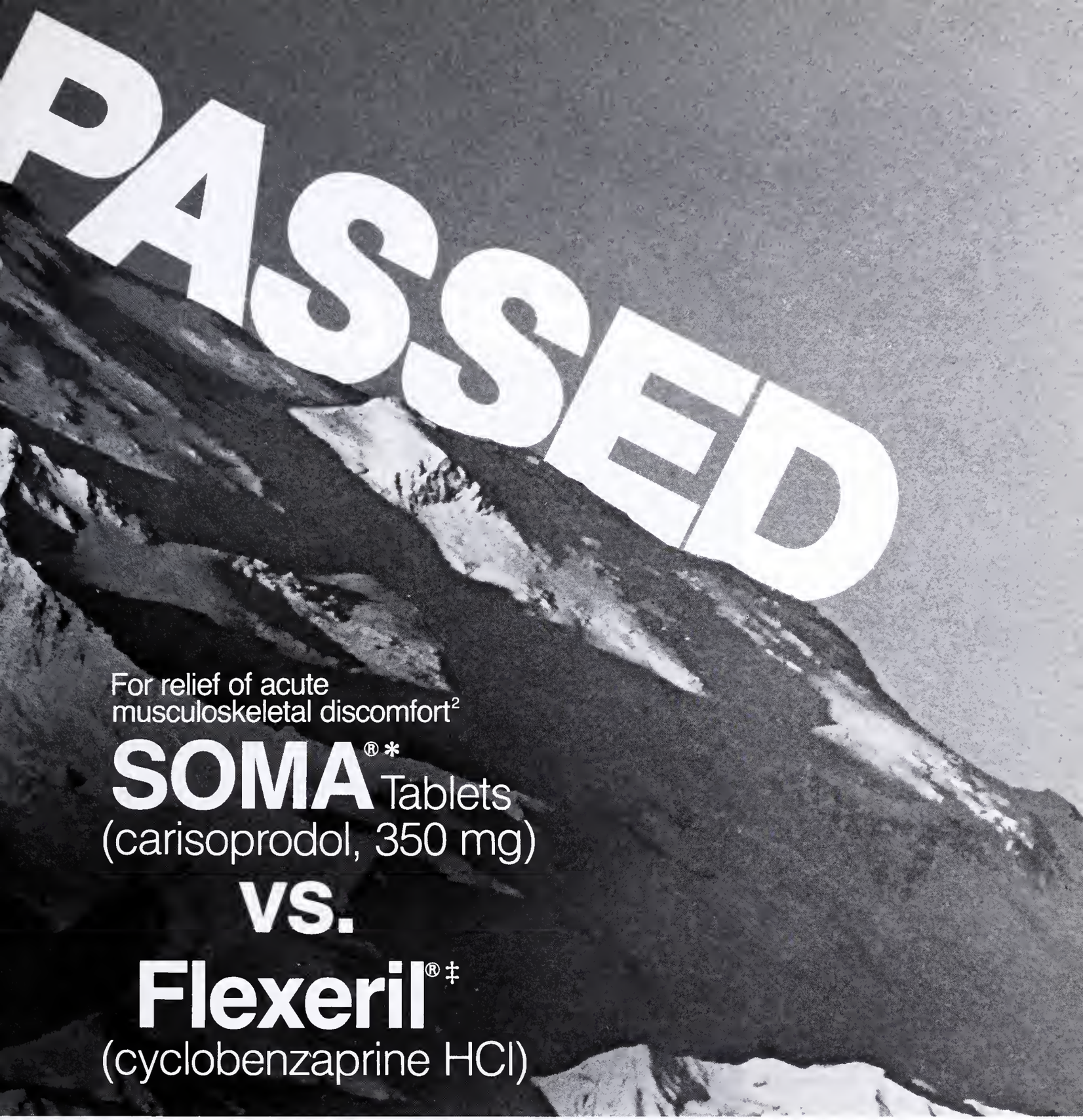
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References: 1. Boyles WF, Glassman JM, Soyka JP: Management of acute musculoskeletal conditions: thoracolumbar strain or sprain. *Today's Therapeutic Trends*, vol. 1(1), 1983. A controlled double-blind study of 71 patients. **2.** Rollings HE, Glassman JM, Soyka JP: Management of acute musculoskeletal conditions—thoracolumbar strain or sprain: A double-blind evaluation comparing the efficacy and safety of carisoprodol with cyclobenzaprine hydrochloride. *Curr Ther Res*, vol. 34, Dec. 1983. A controlled double-blind study of 58 patients.

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Medicaid Lock-in

Continued from page 13

1977, to December 21, 1983, Hawaii's lock-in program has enrolled 270 Medicaid recipients out of 682 unduplicated cases reviewed (Table 2).

According to a New York report of 1982,[3] very few fair hearings have been conducted with the majority of decisions upholding the restrictive action. Hawaii's statistics confirm this finding (Table 4).

In addition, 3 cases were restricted and the restriction rescinded by the department when technical errors were identified even though the recipients had not requested fair hearings.

Recorded from July 1, 1977, to December 21, 1983, were 23 instances of multiple restrictions. Seven cases were rescinded due to fair hearing requests and then re-restricted because fair hearing rulings supported the department's action. Fourteen cases were closed because recipients became ineligible; when they again became eligible, restriction was restored.

In only one instance a restricted recipient was in compliance, restriction was rescinded, and then restriction had to be restored because of recurrence of abuse. There was one restricted case in which the recipient was in compliance when the case became inactive. When it was reopened, the recipient was allowed full privileges. However, due to incorrect data, he again was restricted. When this error was identified, the restriction was rescinded.

Of the recipients counseled, warned, and voluntary restriction solicited during the 4 years 1980-1983, 50 remained in compliance for 1 or more years with no further abuse, indicating counseling and warning was effective 21% of the time (tables 2 and 4).

Based on available retrieved data of the lock-in Program, restricted recipients and those who were counseled and warned in active status in 1983, savings, calculated according to federal guidelines 42 C.F.R. 433.213C(1), totaled $909,922.31 for 1983.[11] In calculating the amount of savings, the total amount expended and paid by the Medicaid program for a recipient for 4 quarters prior to the warning or restrictive action is taken and the average determined by quarter. This becomes the base quarterly amount and is compared with the amount paid quarterly after the action is taken. The difference is considered savings by quarter.

Since data are based on payment records and providers are allowed up to 1 year to submit service claims for payment and allowing for processing time, the true savings should be viewed in terms of 1 year of data rather than by a single quarter for any recipient.

Some lock-in recipients show no hospitalization or true medical necessity (Table 6). A few continue to be abusers; in general, though, the degree of abuse is less.

Savings for prior years are not available for yearly comparison, as initial attempts in 1982 and early 1983 to recapture data were manually performed and incomplete. It is expected that, with computer-generated quarterly reports developed in the first part of 1984 for the lock-in program recipients, data will be more complete in future studies.

Conclusion

Hawaii's experience with the lock-in program confirms results reported by other states in cost containment. Due to limited office staffing, the Medical Care Administration office's efforts from August 1979 to December 1983 were performed by one medical consultant whose other responsibilities did not permit full-time attention to this program. Nevertheless, savings achieved still were significant even in the 5th year.

In the earlier years, abusers were noted to commit greater misutilization, overutilization, or substance abuse. Review

TABLE 6. Sampling of identified substance or service abusers who also have recognized medical problems requiring periodic hospitalization or frequent services. Expenditure in dollars.

Case	*Warning* Date	Quarterly Base Prior to Warning	Restriction Date	Quarterly Base Prior to Restriction	1982 Third Quarter	1982 Fourth Quarter	1983 First Quarter	1983 Second Quarter	1983 Third Quarter	1983 Fourth Quarter
A.D.	4/81	$ 1,940		$ 7,763	$1,596	$ 1,174	$2,497	$2,509	$ 639	$1,199
C.B.		23,245	3/80	5,811	2,229	2,112	1,157	4,711	5,152	452
J.R.	7/80		3/82	796	370	202	770	1,749	192	413
S.G.			12/79	1,294	618	1,372	1,990	560	562	372
T.S.	5/83	4,543			779	1,154	2,004	997	661	704
L.K.	7/82	10,122		32,409	5,513	21,170	2,596	131	0	109
E.T.			1/80	1,953	1,794	2,495	6,576	3,376	247	4,956
B.F.			1/80	1,779	714	678	2,054	699	1,391	862
R.P.	5/81	14,569	5/82	3,642	2,719	2,697	727	1,034	267	443
V.J.	10/80	1,592	3/82	5,650	2,069	3,171	1,043	863	1,056	1,255

TABLE 7. Sampling of abusers illustrating effect of restriction (savings in dollars).

Case	*Warning* Date	Quarterly Base prior to warning	Restriction Date	Quarterly Base prior to restriction	1982 Third Quarter	1982 Fourth Quarter	1983 First Quarter	1983 Second Quarter	1983 Third Quarter	1983 Fourth Quarter
D.T.	1/80	$ 389	6/83	$ 819	$ 702	$ 715	$1,005	$ 634	$174	$233
M.H.	1/80	10,563	11/83	2,775	3,521	12,841	830	905	314	296
H.J.	9/81	1,320	1/82	3,984	303	797	463	323	64	50
M.S.			12/79	771	63	298	497	463	107	50
E.E.			1/80	1,468	1,471	293	610	625	197	228
J.C.	3/83		11/83	1,393					576	182
W.M.			4/80	4,322	211	503	0	28	90	439
V.S.	1/83		9/83	1,064					376	417
C.B.			1/80	1,151	678	1,548	518	631	0	0
D.J.	10/80		2/82	2,978	572	811	346	1,847	89	90
K.F.	9/80	2,727	6/83	440	893	1,261	640	496	270	74
C.F.	3/81	724	3/82	2,897	1,643	421	112	449	0	0
C.Y.			4/81	2,415	462	645	787	231	123	71
M.B.			1/80	772	847	1,156	55	2	239	128
C.A.			12/79	2,783	931	790	177	0	0	0

of the overall achievement supports the position that once applicants are determined eligible for assistance, they should be mandatorily required to select a primary care physician of their own choice to coordinate all care. This is allowed under federal regulation as a program waiver under 42 C.F.R. 431.55(c).[11]

The primary care physician may be a family practitioner or general practitioner who would make the referrals to specialists when necessary. Savings could be substantial in avoiding duplication of laboratory or X-ray studies; duplicating drugs or different drugs with duplicating actions leading to drug dependency or complications requiring additional medical care; unnecessary usage of specialist services whose charges are higher in general, as well as coordination of total care which results in better case management.

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About the Author

Florence J. Chinn, M.D., has been a full-time medical consultant to Hawaii's Department of Social Services and Housing, Medical Care Administration office since August 1979 when she was assigned responsibility of recipient abusers in addition to her other responsibilities. She authored the manual Integrity Methodology. From April 1980 until November 1983, she also worked in the area of provider fraud/abuse and served as Program Integrity Unit Supervisor from January 1983 to November 1983. With internal reorganization, she currently serves as consultant to the Program Integrity Unit and retains her other responsibilities as a medical consultant to the department.



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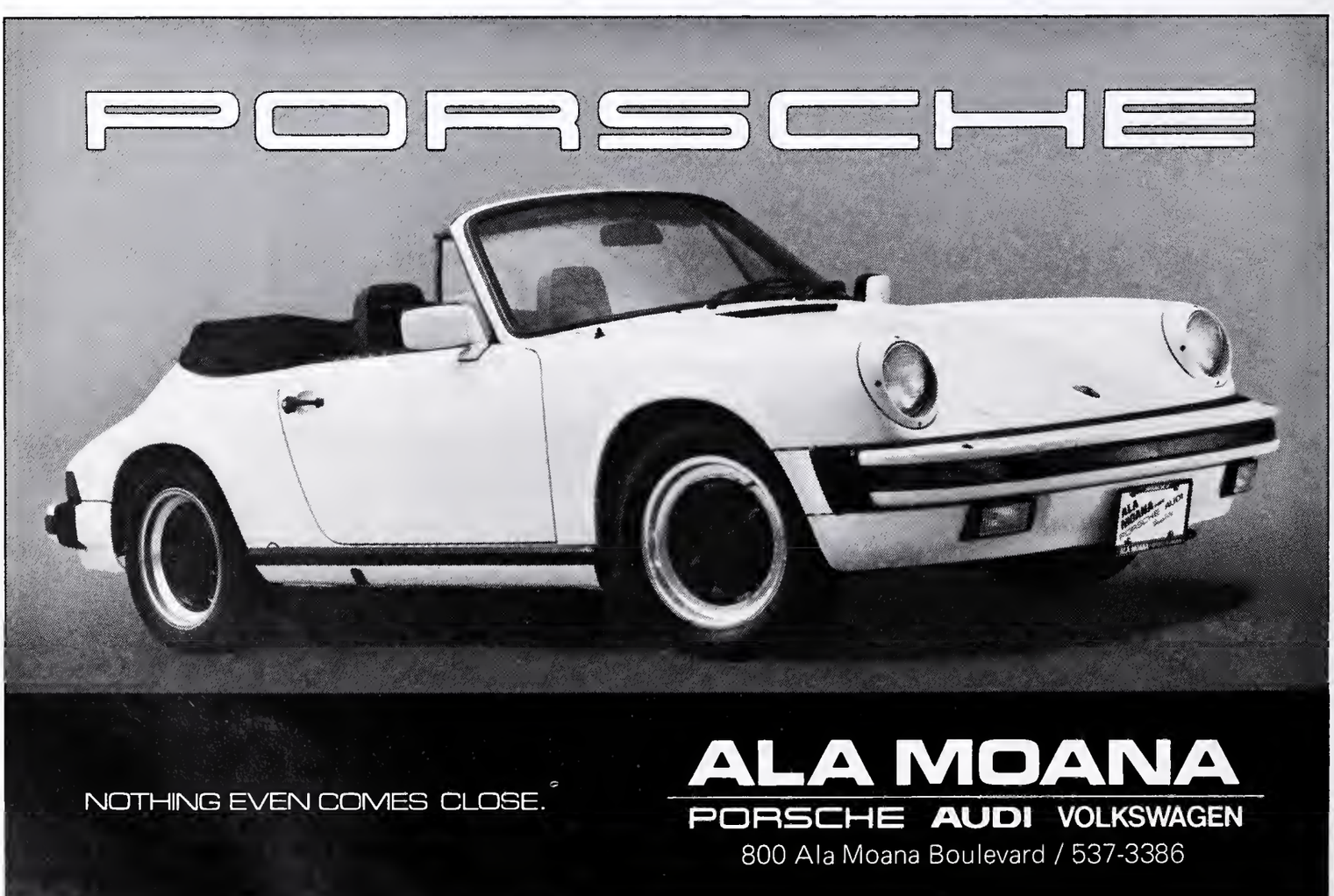
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Living Wills and Dying in Hawaii

Lawrence L. Heintz, Ph.D

• *It has become common knowledge that 80% of Americans die in hospitals or nursing homes. Many elderly Americans do not fear death so much as they fear the loss of control in the last weeks, months or years of their lives. They fear that they will enter a nursing home or hospital and will lose control over physical and mental functions, thereby losing dignity. Through aggressive and rigorous utilization of medical technology. American medicine is often able to maintain physical life, or to prolong death, almost indefinitely. Given the commonness of the "it's there, order it" approach to treatment, the fears of the elderly are often well founded.*

The moral question of whether to withhold or to withdraw life-prolonging therapy in the case of elderly debilitated or terminally ill patients is now a common but complex one. Moralists, lawyers, physicians, and philosophers have made considerable progress in offering answers to these questions. The central issue in all these cases is: "what does the patient desire?" Some individuals have tried to answer the question for their own cases in advance by writing "living wills."

The living will has been around a long time and is a rather non-controversial topic. It is difficult to find people who strongly object to the idea of living wills; unless they confuse them with acts of suicide or active euthanasia. Doubts also arise for those who fail to distinguish between "killing" and "allowing to die" or who fail to distinguish between "intentions of actions" and "actions."

We all understand the notion of a will as a directive to disperse or dispose of possessions after one's death. A will only takes effect upon the death of the testator (maker of the will).

Living wills do not have to do with one's property but rather with one's self, and they are intended to take effect while one is alive. They are an advance directive of one's views about future decisions regarding one's own health care. Concern over the loss of ability to direct care at the end of one's life has given rise to this concept.

Fifteen states have "natural death acts," which give a legal status to living wills. However, there is reason to believe that most of such statutes create more problems and uncertainties than they solve. For example, a study conducted after the California statute was enacted reports that while 6.5% of physicians surveyed reported that they withheld or withdrew procedures they previously would have administered, 10% reported they provided treatment they formerly would have withheld. So if living wills are intended to result in less aggressive treatment at the "end of life," their legalization had the reverse effect in California.

While the intent of the legislation is to only give legal recognition to living wills of patients, natural death acts have affected patients who did not make living wills. A surprising result of natural death act legislation is the "conservative" interpretation by many physicians. These physicians treat patients without living wills more aggressively than they would have done before the legislation. They are taking the lack of a living will to be a positive statement for aggressive treatment. While it is clear to some that these statutes were meant to authorize a new and additional means for patients to refuse life-saving treatment, it appears that a new layer of judicial interpretation is needed to establish that they do not limit decision-making of patients who have not executed living wills.[2,3]

One further difficulty with natural death acts is the feature that "provides patients with living wills the opportunity to reconsider." In short, a waiting period is imposed before the living will is respected. In practice, this could mean that a patient would enter the hospital and be treated aggressively for 2 weeks before his living will could be respected.[4]

This is one of many examples of legislation that has turned out to be no clear improvement over common-law rights and responsibilities that exist in the patient-physician relationship. A survey of natural death acts makes one wonder whether they advance or set back the wishes of patients.

The President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research in its report, "Deciding to Forego Life-Sustaining Treatment," gives faint praise to natural death act legislation.[5] The report states that the primary value of such legislation is: it "provide(s) the impetus for discussions between patients and practitioners." Much to the distress of some and the relief of others, Hawaii is not one of the natural death act states.

Are we lucky we live in Hawaii? The President's Commission thinks so. Hawaii is one of 42 states that has a "durable power-of-attorney (DPA)" statute. In the commission's view: "Durable powers-of-attorney are preferable to 'living wills' since they are more generally applicable and provide a better vehicle for patients to exercise self-determination."

*Associate Professor of Philosophy, University of Hawaii at Hilo, and medical ethicist at Hilo Hospital.

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What is a durable power-of-attorney? And how does it solve the problem that the living will was designed to solve? A power-of-attorney is a document through which a person (principal) appoints someone as his agent and gives that person the legal authority to act on his behalf. A "durable" power-of-attorney provides that the legal authority to act continues after the incapacitation of the principal. A DPA, then, is an "advance instruction" that has legal authority. There are 2 components of DPA as applied to health care decisions at the end of life. First, a DPA identifies a proxy; second, it specifies what the proxy will do.

A durable power-of-attorney is a living will plus a directive that names a proxy who has legal authority to carry out one's instructions.

Sample Living Will

The following is a "sample" of a DPA[6]:

"I, the undersigned, this — day of —, 19—, being of sound mind, willfully and voluntarily appoint (legal name), whose current telephone number and address are (telephone number), (street address), (city and state), to accept or refuse medical treatment on my behalf and in my interest if, due to a condition resulting from illness or injury, and in the judgement of the attending physician, I become incapable of making a decision in exercise of my right to accept or refuse medical treatment.

Signed_____
Address_____

The person signing this document is known to me, and I believe him or her to have willfully and voluntarily signed this document.
Witness_____
Address_____
Date_____

Witness_____
Address_____
Date_____

"As agent or alternate agent I understand that acceptance of this appointment means that I have a duty to act in good faith and with due regard for the interest and benefit of the person appointing me:

Agent's signature_____
Date _____
Alternate agent's signature_____
Date_____"

Advantage of DPA

What is the advantage of a DPA over a living will? The major advantage is that, if executed properly, it spreads the burden of decision to a broader and more stable base. At the same time, the DPA greatly enhances the chances that

the wishes of the patient will be followed.

Hospitalizations of terminally ill patients with living wills often have the following features:

(1) The will is given to a physician who interprets it in light of his understanding of the patient's whole condition. The will nearly always contains very general language which requests restraint from "heroic" or "extraordinary" measures under certain circumstances. In practice, the physician's interpretation of such notions often varies greatly from that of the general public and presumably from that of the patient.

(2) Invariably the physician must deal with family members who are emotionally distraught by the prospect of the death of a loved one. The needs of family members further complicate and confuse matters. It is often difficult for the physician to resist the temptation to place the emotional needs of the family first. It is not unusual for physicians to prolong dying in order to allow family members to cope with and accept death of a loved one. The patient's living will is eventually followed, but only after a week or more of technological intervention.

On the other hand, DPAs retain the decision-making in the hands of the patient's proxy, who acts to carry out the wishes of the patient after receiving the advice of the physician. The physician retains the role of provider of expert medical advice, while the patient through his proxy retains the responsibility to decide what to do with the advice and recommendations.

It is often recommended that the proxy be a very close friend of the patient or an especially strong and stable family member. A DPA does not remove the great emotional and psychological burdens mentioned in the previous paragraph, but it does provide a vehicle to diversify the decision-making responsibility. Specifically, it removes it from the physician who is likely to be torn by a conflict of loyalties. The physician faces the reality that he must balance two sets of responsibilities, those to the patient and those to the family. Without a durable power-of-attorney the dying patient may often pay in days of added pain and all in spite of written instructions to the contrary.

When it comes to decisions at the door of death, living wills are a great help to both patients and physicians. But a durable power-of-attorney with a carefully selected proxy is one's best hope.

Can Hawaii's statute be improved? Probably so. It was not initially designed with proxy medical decision-making in mind and hence may not have adequate procedural safeguards. Our legislators might do well to modify the existing statute by adding a provision which explicitly provides for the appointment of an agent for medical decision-making.

Sources for further information are references.[7-8] More can be and needs to be said about DPA and living wills. Community service groups and church groups should provide informational programs on the subject.

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Marijuana Update

For Concerned Parents, Physicians, Youth and Citizens of Hawaii

Clare Sprague, M.D.*

• *Jacques Yves Cousteau said: "If we are concerned about the external pollutants which threaten our environment, we should be equally concerned about internal pollutants—like marijuana products. For sheer survival we must defend ourselves against both kinds of pollution. We need to keep all our senses constantly at their maximum keeness if we are to enjoy and take full advantage of our short participation in the miracle of life."*

As a parent-physician living and practicing in Hawaii from 1957-1973, and as a frequent visitor to Hawaii after settling in Australia in 1974, I have become more and more concerned for the children and young people of Hawaii with each passing year because of Hawaii's continuing deep involvement in drug abuse.

In particular, I see that Hawaii's "marijuana culture," the mistaken acceptance or unwitting toleration of marijuana as a safe or "soft" drug, its cultivation and trafficking, is still putting Hawaii's children (and Mainlanders and visitors to Hawaii as well) in jeopardy.

The wall of denial, the ignorance of parents and youth as to the real facts, and the apathy and fear of violence, crime, and corruption still must seem to be almost insurmountable obstacles in effecting change for the better. Of course, this is not just Hawaii's problem, but one shared in many other places — and it will not just go away. Marijuana, alcohol, and other drugs used, not only by young people, but those not-so-young, seem now to be endemic to the "laidback" Hawaiian life style.

Now that cocaine, "the great addicter," the most dangerous and popular drug of all, has hit Hawaii so hard, most people seem to forget and not want to know that the base drug, the gateway drug was and still is marijuana.

The research findings and the methods to prevent drug abuse are available through several reliable sources on the Mainland, mainly through the Parents' Drug Education Movement. Prevention groups, now numbering more than 4,000 throughout the other states, and similar initiatives in other countries (e.g., Sweden's parent groups, functioning for 20 years, have been effectively turning around their drug epidemic) are showing the way.

These groups and other community action groups like the Lions' clubs, Chemical People Task Forces, and PADA (Pharmacists Against Drug Abuse), to name but a few, are having an impact on both prevention and control efforts of society, adding the missing ingredient — parental and youth education and action. There is little evidence that Hawaii's parents and professionals are "sticking their necks out" very far as yet. All seems very quiet on the Hawaiian front but this can change.

My concern for Hawaii grew even greater when I saw no one from Hawaii at either the National Federation of Parents for a Drug Free Youth (NFP) annual conference in September 1983 or in March 1984 at the PRIDE International Conference on Drug Abuse. A group of 7 Australian parents and professionals, of which I was one, and representatives from almost all of the other states and 29 other countries, totaling about 1,000 youths and 1,000 adults, attended and were informed and inspired by this conference.

All of us from Australia, where the "pot," alcohol, tobacco, and heroin problems now are out of control, came away with a renewed sense of hope and a fund of accurate medical and scientific data and educational materials and methods that we could never have developed on our own. The confirmation is stronger each year in NIDA surveys and in reports on individual and community successes that this approach really does work. So, perhaps the main purpose of my submitting this paper to the HAWAII MEDICAL JOURNAL is to encourage parents, youth, and especially fellow physicians to get involved.

Parents' and Physicians' Resources of Special Value in the USA

Excellent educational material of all types is available from the following reliable sources: (All of these organizations welcome and will respond to written enquiries.)

National Federation of Parents for Drug-Free Youth (N.F.P.), 1820 Franwall Ave., Suite 16, Silver Spring, Maryland 29092

Parents' Resources Institute for Drug Education (PRIDE), Georgia State University, University Plaza, Atlanta, Georgia 30303

American Council on Drug Education, 6193 Executive Blvd., Rockville, Maryland 20852

Personal Experience

To share with you my own personal experience as the parent of 4 children in Hawaii, having to move 3 of them out of the marijuana smoke screen of the late 1960s and 1970s, and my subsequent experience in the areas of drug rehabilitation and prevention in Australia with my own and other people's kids, would fill a long book! So, I'll spare you that.

But briefly, it goes like this. Of my 4 children, all now in their 20s, 3 still live in Hawaii. One of them became at the age of 13 seriously addicted to marijuana, after "experimenting" with friends starting at age 12. She had been a normal, popular, very beautiful, engaging, and good child. She progressed in the next 2 years into multiple drug use; her personality changed radically and she became involved in various kinds of unhealthly and illegal behavior. She dropped out of school and the healthy activities she had loved previously.

We parents had few clues as to what was really going wrong in her life. It was back in 1973 that a father of her friend phoned me after he had walked in on the girls shooting-up cocaine. Then we had a shocking confirmation of our worst fears. We had not seen or had denied the real problem or had blamed our differences and defects as parents on society, and we had gone along with lies and subterfuge of our daughter and the youth drug scene up until then.

*Lately of Australia and formerly Pathologist, Kapiolani Hospital, and Assistant Clinical Professor of Pathology, University of Hawaii School of Medicine, Honolulu.

Accepted for publication July 1984.



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As it turned out, all the neighborhood kids were users. It was the cool thing to do, and the myth of harmlessness about marijuana etc. abounded unchecked.

It still must persist in Hawaii today despite overwhelming evidence to the contrary.[1]

Only drastic measures ensuring a complete cessation of drug-taking will work when a child is as far along in the stages of addiction and decline in mental and physical health and self control as my daughter was. After confrontation (with love), she agreed to come away with me. So we broke up the family and I moved her first to California and then to (at that time) relatively drug-free Australia. I fortunately had been offered an interesting but low-paying position in the GROW community Mental Health Movement there. (In 1971 I had started the first GROW group in Hawaii after a vacation trip to visit a friend in Australia when I had encountered this outstanding mutual help organization which has since become well-established in several other countries including the Mainland.)

Comeback

With support and encouragement in a drug-free environment for several months, my daughter began to get her motivation and good sense back. She got a job in a "frock shop" in Australia and started growing as a person and regaining over time the vitality and health and the interests in life that still are promoting her growth to adulthood. She has gone through an incredible amount of suffering and has courageously carried on, picking herself up after several crises and relapses into drug-taking. In fact, for the past 5 years she consistently has been moving forward in life.

I also moved my 2 younger sons, ages 13 and 15, to Australia for 2 years, as I suspected that they would not be able to resist peer group pressure in Hawaii. As it turned out, they already had been exposed to pot many times since about the age of 12, and so they were rescued from high availability, pressure, and use for a time at a critical point in their lives.

Meanwhile, the eldest son had moved himself to Hilo at age 19 in order to get away from the drug scene and friends on Oahu after he realized that pot had ruined his memory. He, too, has come through those years of heavy alcohol and pot use well and, although he claims not to have as good a memory as he once had, he recently received his degree in physics.

Although all 4 children are alive and well now — thank God — most of their teen-age friends are not so fortunate; some are dead. Each one still is hampered to some extent by persisting immaturity or physical problems directly or indirectly related to prior marijuana and drug use. Our kids have courageously kept on picking up the pieces and filling in the gaps in their mental and emotional development, education, relationships, and life values.

The 3 in Hawaii still find it very hard to find non-druggie friends who can think straight, and 2 are planning to move away soon, as my oldest son has done. He now lives with his wife and 2 young children in California where he works as a physicist. The ones still in Hawaii say that they are sick and tired of the cocaine scene and life style. One is finding it very hard to keep the same friends and still keep "straight."

From the perspective of a physician, scientifically oriented pathologist, and a mother — an intelligent, well-educated, well-meaning, and clean-living person like you, who did not, could not, or would not see the true situation for quite a long time and do something effective about it sooner — I surely feel compassion for other parents but mostly for the unwary victims, our children. We parents and professionals now have a much better chance of preventing drug use induction and of intervening early. We dare not — through lack of time, ignorance, or lack of caring — let this opportunity go.

This personal experience with my kids and the research I have done in the past 10 years has been almost another medical education for me. Trying to dig the facts out from scattered sources has been difficult. My outdated pharmacology notes and texts of the '50s, and even most of the literature of the '60s and '70s, rarely got beyond the myths of harmlessness propounded by university types such as Timothy Leary and other promoters of drug-taking.

The medical profession and government have been slow to see that very telling research studies were in fact done in the '70s, and historical data from other cultures were available. But now in the '80s there is no longer any doubt or debate in the scientific and medical community on the very harmful effects of marijuana. My search has turned into a new commitment to share what I've learned with others.

I have been so impressed with the parents' movement and resources of PRIDE, NFP, ACDE, and NIDA that currently I have been working with others to establish a similar organization in Australia, which is isolated from the rest of the world aside from its closeness to major sources of drugs and the "do-drugs" media. It needs all the help it can get. Sadly, Hawaii shares this need.

In attending conferences the past year, I have found it rewarding to be involved with so many warm, surprisingly intelligent, ordinary people and dedicated professionals. By breaking out of the conventional life of a specialist in Hawaii into the less secure and unconventional type of health work, I have been able to put my personal and medical knowledge to a more meaningful use. Many of you would find the same kind of "happiness" getting involved in this mutual-help community work. You need not kick over the traces, leave your professional work behind, or move to another place as I did, but at least take a few more risks to be involved at this challenging level of life.

A Call to Help

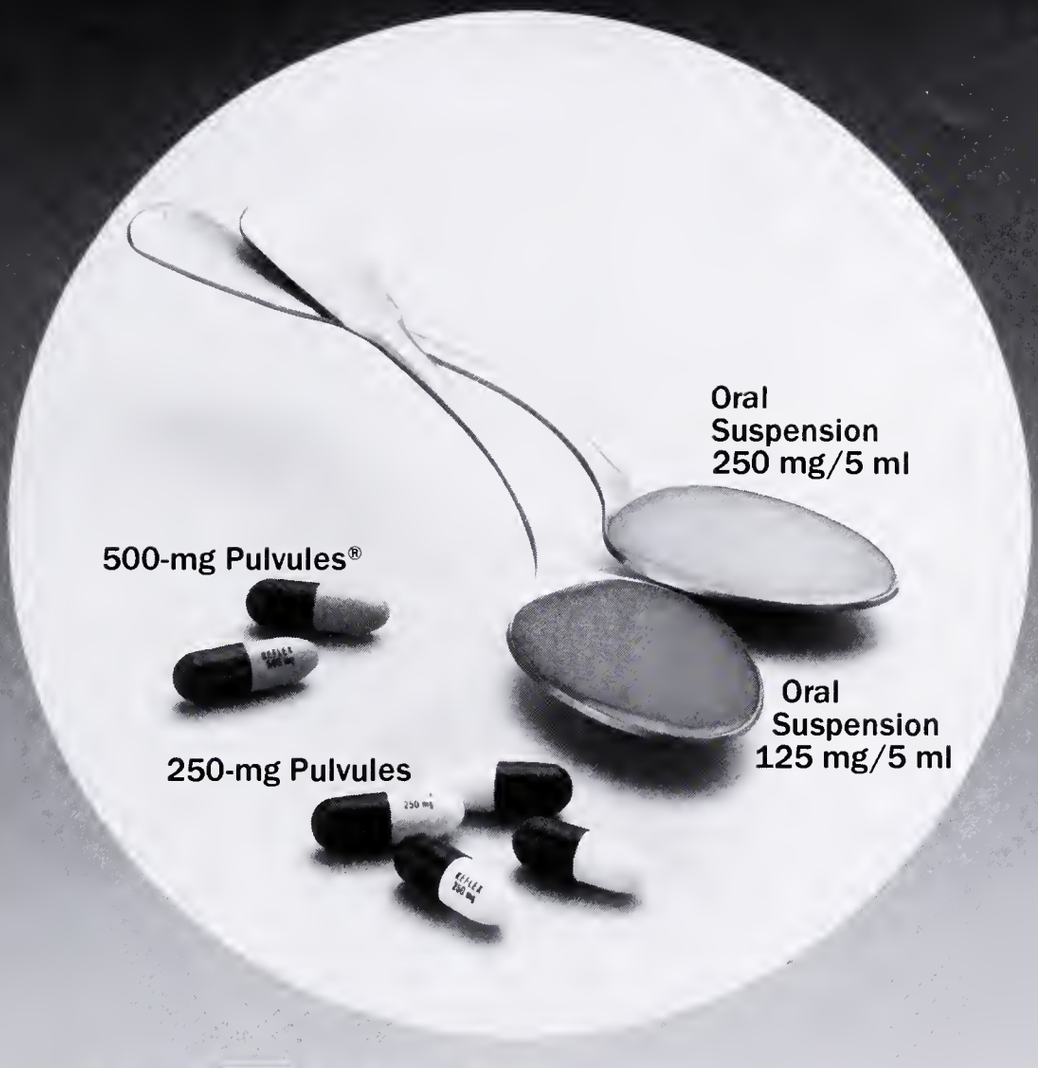
The parents and youth of this state and this world need informed and helpful professionals working with them, and we professionals need ordinary parents to work with us as friends, too. We all must work together to prevent the use of these pleasant poisons which so rapidly are destroying the health of our youth, the fabric of society, and the potential of future generations.

Harmfulness

Leading clinical research experts and public health officials in the USA, Canada, and other countries are now in full agreement on the evidence of marijuana's harmfulness. More than 7,000 research studies all point to and confirm the following conclusions:

1. Immediate effects:
 Intoxication with marijuana has serious effects on mental functions, perception, judgment, control, and skill in driving or any other complex task. Psychotic episodes are common.
2. Chronic and interim effects from regular use are:
 - Long-term storage in lipid of body cells
 - Significant, long lasting brain cell and synaptic alterations (micro-structural, electrical, and biochemical) in limbic area of brain
 - Poor short-term memory, slowness of learning and illusional thinking
 - Lung damage and cancer risks many times greater than tobacco's
 - Reduction of pituitary hormones, LH and FSH
 - Decreased testosterone, reduced sperm count and motility, altered sperm structure (with chromosomal and DNA alterations)
 - Interference with ovulation and the hormon cycle in women
 - Suspected mutagenic alterations in DNA of germ cell chromosomes
 - Embryocidal toxicity and development impairment in the fetus and newborn exposed in utero or in milk supply in newborn
3. Did you know?
 - Many of the more than 420 chemicals in marijuana or hashish smoke and their by-products are harmful to human cells
 - Delta-9-tetrahydrocannabinol (THC) is the main psychoactive cannabinoid studied so far
 - The content of marijuana used in the 1980 is 10-20 times greater than in the early '70s
 - A "bong" (or water pipe) delivers a much greater dose of THC than a "joint"

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• THC is stored and doing harm to brain and body cells weeks or months after last use

• "Amotivational syndrome" — energy loss, poorer school and work performance (lowered SAT scores), harmed parental relationships, diminished health, vitality and regression in maturity — is progressive in regular users

• The more you use the more you need — due to increased tolerance. Psychological and physical dependence (i.e., addiction) commonly occurs in regular users

• Regular use provides the chemical "gateway" to almost all heroin, cocaine, LSD, etc. use mainly by its disabling brain effects and tolerance build-up

• Use by children and adolescents is the chemical and social gateway to early sex, unhealthy relationships and values, and the health problems that result

• Pot smokers drink more alcohol, smoke more tobacco, and use more other drugs — compounding the health risks.

• The anti-nausea effect of pot is one of the main reasons for the marked increase in damaged young alcoholics and for many alcohol ODs and "accident" deaths attributed to alcohol alone

4. Most importantly:

The younger the user, the greater the vulnerability to damage, developmental impairment and drug-dependent life style.

How Harmful is Marijuana?

Is marijuana really harmful when used alone? Unfortunately, the answer is "yes."

To many scientists, doctors, and ordinary citizens in the 1960s and '70s, marijuana did not seem to be harmful in the same way other "hard" drugs were harmful, because its effects were subtle and mild, and its use so easily hidden. For this reason there was a tendency to minimize and to regard it as a "soft" drug.

The sad truth is that the marijuana of today is neither safe nor soft. There has been, and still is, a lot of wishful thinking concerning the safety of marijuana. Since the optimistic conjectures of the '60s, reports have been mounting which document the serious immediate and cumulative effects of marijuana on the user, as well as on society.

There are now more than 7,000 reports in the scientific and medical literature documenting that marijuana is far more harmful than it was first thought to be: The marijuana of today is at least 10 times stronger and more damaging than it was in the early '70s — another important cause for concern.

Marijuana harms the brain memory, learning capacity, and personal development. The brain of a person who has smoked marijuana 2 or more times a week for as little as 2-3 years can be expected to have organic structural and functional changes in brain cells and synapses. This information derives from the confirmed research findings of R. Heath, M.D., M. Issidorides, E. Sassenrath, and other highly respected scientists on the brain, brain cells, behavior, and mental functions of the monkey, man and other species of mammals. [7,20,21]

The regular user, after he has stopped, slowly may regain most of his brain functions and mental abilities, but some of the damage will be permanent.

The younger the user, and the more and longer he smokes, the more likely he is to be mentally and physically affected.

Marijuana, by its chemical effect on the brain, alters perception, diminishes attention span, and impairs good judgment and self-control. It affects the part of the brain that controls emotions, such as the feeling of pleasure, and disrupts the short-term memory. This might not seem to make marijuana much more harmful than alcohol, which also affects the brain. But, unlike alcohol, which is eliminated in hours, active ingredients of marijuana are stored in the brain cell membranes and body fat. Substances which are stored in membranes and fat are accumulated and only very slowly released into the blood stream. This means that if you smoke a joint today, it may be weeks before the last trace of marijuana chemicals has left your tissues.

It takes about 3 months to detoxify a moderate user; 6 months to detoxify a heavy user. It often takes this long for the mental fog to clear and far longer to recoup losses.

Days and even weeks after smoking his last joint, a regular user of marijuana still is "stoned," but without any "high" feeling. His mind still is being chemically disabled and he doesn't recognize it. His memory and judgment are reduced, but he doesn't know it. In fact, he may have the illusion that he's never been better!

Therefore, marijuana plays complete havoc with the education and maturing of young people and even learning a job. A young person who has been smoking pot the night before can attend school or go to work feeling and looking sober, but he is unable to remember much of anything he is supposed to be learning. To the adults around him, he seems unmotivated, disinterested, and bored. He no longer is interested in the things, people, and activities he once enjoyed. He is less likely to be productive in school or work and will settle for "going nowhere." Many merely go through the motions of trying to get or keep a job or go back to school, but will settle for the "dole" without too much of a struggle or will "rip off" their ever hopeful and trusting parents or trade in drugs.

A person with a toxic level of marijuana components in his brain no longer can evaluate his condition because he already has an organic mental illness. Whatever problems he had to start with have been compounded. Until he solves his biggest problem — drug-taking — he hasn't a hope of solving any other problem. He will become depressed and feel like he's a failure, adding fuel to the fire of his self-destructive behavior. He may well feel that everyone is against him and may slip into more profound isolation, depression, drug-dependence, and all the unhealthy relationships and behavior that are part of the sick indolent world he's grown into. He can't taper off. He must stop entirely and relearn growing up straight.

Permanent Mix-up

Sadly, a good percentage of these otherwise bright and promising young people never do work their problems out. Some users break down completely, becoming temporarily or permanently psychotic. (In the U.S, 60-70% of the vastly increased mental breakdowns in the 15-25 age group primarily are drug-related.) Marijuana does trigger or accentuate mental illness in vulnerable individuals. Some simply drift, never achieving their potential. Some gravitate into "hard" drugs and crime and are lost. Some commit suicide or die from other drug-related deaths. Few simply "grow through it" as a stage "of experimentation." Therefore, it is a myth that "experimental" or "recreational" use are all right.

Marijuana chemically threatens immunity, reproductive, and sexual functions. It interferes with the body's immune system and its ability to fight off infections. It damages the chromosomes that control heredity. It reduces the production of male hormones and reduces the sperm count. It affects ovulation in the female. It kills a large percentage of the embryos and very young fetuses in pregnant mothers who smoke marijuana. Those babies who survive tend to have a lower birth weight and also exhibit physical and behavioral abnormalities which may last. After THC exposure, male mice pass on mutational germ cell changes to their apparently normal unexposed sons. Malformations occur in their progeny. The same chromosonal abnormalities are found in sperm of the exposed fathers and unexposed sons.

Marijuana chemically interferes with maturation and development physically, emotionally, and mentally. Drug-taking years are wasted years in terms of "growing up." The younger and more immature the user, the greater the maturity-stunting effect will be.

Marijuana chemically damages the lungs and, at least functionally, the heart, too. A joint contains at least 20 times the cancer-promoting substances of ordinary cigarettes. All the other respiratory problems from tobacco occur sooner with marijuana-smoking.

Marijuana is physically and psychologically addictive or dependence-producing. Tolerance develops so that an increased dose is needed to get high. The dependence and craving of addiction occur especially in the daily user, making it

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difficult for him to give it up without help. A complete cut-off from use is essential to recovery. Tapered withdrawal from slow removal of marijuana chemicals from the body explains the relative mildness of withdrawal symptoms.

Marijuana seriously impairs driving skills and judgment. Added to alcohol, the effects often are lethal. Operation of any equipment or vehicle requiring accurate time and space perception is hazardous.

These are now scientifically indisputable facts. The saddest fact of all is the one group of people who are 100% vulnerable to marijuana is our young people.

Legalization Not the Answer

Hawaii has been moving toward decriminalizing or legalizing the use of marijuana as it seems to have become "normalized" into the youth culture, and as a crop accepted quietly as part of the culture. The steps already taken along this road have been *defacto* decriminalization. There seems to be renewed and even more vigorous efforts to weaken marijuana laws, and now even cocaine and heroin are recommended for legalized "recreational use" by some.

Proposed changes to weaken marijuana laws have been on the drawing boards, and the controversy has been in the news since the early '70s. The publicity surrounding any proposed change has been, and still is, dangerous because it conveys to an otherwise uneducated public and to young people that perhaps marijuana may not be so dangerous after all.

Furthermore, any actual weakening of the laws would carry an even stronger "do-drug" message, whether intended or not. Therefore, young people assuming that it is safe enough will continue to use or start to use marijuana and be involved in growing and selling it without any awareness at all of the serious short- and long-term effects on their own and other's mental and physical health; the control of their own lives; and their future success and happiness in life.

Experience in other countries provides enough evidence to bear this out. The main advisers and the main instigator of the publicity concerning decriminalization and legalization of marijuana seems to have been the NORML organization (National Organization for the Reform of Marijuana Laws). It is a transplant from the Mainland and is a highly organized lobby started in 1970. It is now particularly active overseas, in Hawaii, Australia, etc.

The reasons given by those who are pushing for decriminalizing or legalizing the use of marijuana are:

1. That marijuana is so broadly used by so many people now that the laws controlling it are obviously useless and unfair;
2. By legalizing marijuana, users would not be forced to deal with the criminal element;
3. If marijuana users weren't forced to buy from drug dealers, they wouldn't be exposed to even more harmful drugs (to "hard" drugs).

None of these reasons really holds water. They may sound good, but they obsure the real issue, which is marijuana's extreme though subtle harmfulness to mental and physical health; its addictive and destructive potential; its developmental-disabling effects to the young; and its already rapidly spreading use by younger victims. The disaster is upon us, but we're going on as if it's just a fad or acceptable way of life. The price so many young people are paying makes the selfish indulgence of adult advocates insupportable.

The truth is that marijuana use is not like a fad nor is it just another drug like alcohol and tobacco. There is no disputing the harmful effects of alcohol and tobacco. They, too, are illegal for youth, and so they need to be highlighted along with marijuana in all drug prevention and education efforts.

Marijuana is much more like an epidemic of polio or the plague. It is like a rapidly spreading and very destructive contagious disease affecting primarily the young and immature. It is caused by a poison that is pleasant and addictive, is self-administered by smoking, and has long-lasting effects. It is readily available and actively spread by social contact of "infected" peers and by misinforming propaganda and resistance-lowering factors.

You don't weaken laws or break international public health regulations or treaties in the face of an epidemic of polio or plague. You do the opposite. You shore up and uphold the law, and use every medical, legal, educational, and social means you can muster to stop the easy availability of the contagious agent, to block the infective routes and get rid of the "vectors" of spread; and ensure that your children are protected. You may need to isolate victims and treat them in totally protected environments (drug-free rehabilitation and drug education programs).

Quarantine is also important. You not only treat victims as vigorously as possible but also immunize potential victims. And you keep on doing this until the epidemic is truly over. Then you continue to require preventive health education of parents and immunization by education of the young and require "boosters" to keep up immunity.

The only way to immunize potential victims against drugs is by education and training earlier in life than the time of exposure. This means at the 5- to 10-year-old level. Parents are the first educators of the young and must take this full responsibility; doctors and teachers are the second. It could be disputed that television is now in first, second, or even third place. When used for healthy educational and entertainment purposes, it will be a tremendous asset.

So you start with a campaign to make parents aware and to back up their education efforts and their family and community initiatives. Parents are the ones that know enough to take their kids along for immunization shots. Most parents are pretty intelligent, they can learn, and they do care about their own kids much more than anyone else does! So, parents are the ones to encourage, to respect, and to enable to do the main job which only they can do. They are also ordinarily the ones with the purest motivation — that of real love.

As to the criminal element: There is already a serious criminal element in the user himself and in his "druggie" friends when he first steps across the line to try marijuana, an illegal substance. Criminality escalates in regular users and branches out into different avenues. Trading in drugs (and sex) for popularity, prestige, power, or money is criminal behavior in a user or non-user. But, if a person deals knowingly, by either directly or indirectly providing a poison, that gives the young victim a false feeling of well-being and pleasure, while numbing his memory, stunting his growth, undermining his judgment and control, addicting him, and leading him into the drug-sex-crime scene — an especially nasty and vicious form of crime against individuals and against society.

Most of our young drug-takers are misinformed and immature victims of "generous" friends who share or give them marijuana. They need — and society needs their rehabilitation, education, and constructive contribution to society. So *defacto* decriminalization can be compassionate, constructive, and humane compromise while we continue to uphold the law. If parents can't intervene, arrest may be the only opportunity for constructive intervention within the framework of strong laws, active law enforcement efforts, and rehabilitation and drug education alternatives to jail sentence. You don't legalize the plague just because so many people have it or want to have it. Society must marshal all of its resources; find new, more effective ones; and redouble its efforts to constructively administer justice within the law. The media also must be used more effectively for drug education campaigns and for garnering support for the present laws.

As to multi-drug suppliers and marijuana users, the supplies go together but mainly for reasons other than the fact of marijuana's illegality. Marijuana addicts may seek out other drugs to get higher, or even just to feel good instead of bad after tolerance had developed. Even if they grow their own marijuana, they still want hash (it's stronger), cocaine (it's a



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better high), heroin (it really feels so good), PCP, or anything else available from their friends or friendly drug dealer. Dealers are always around the marijuana scene because they know what an easy mark a pot smoker is. This doesn't improve when the laws change. It simply improves their business.

The wisdom of other countries with far longer experience casts doubt on legalizing marijuana; e.g., China, India, and Middle Eastern countries. Some of these countries were tolerant to the use of marijuana or hashish for thousands of years, until the actual toll these drugs were taking on individuals and the nations became apparent. Now some of these countries have the strictest laws in the world against marijuana use and sale to their own people. Some countries continue to export hashish or other drugs but wouldn't allow their own people to use them.

International Treaty

In 1961, the United States signed the U.N. Single Convention Treaty on the control of narcotic and stupifying drugs along with most other countries. This treaty followed a thorough investigation over many years. Marijuana was included as a very harmful drug in its own right and, along with opiates and cocaine, as drugs that should not be legalized but should be strictly prohibited and controlled. Any state or country weakens international accord by decriminalization or legalizing any of these drugs.

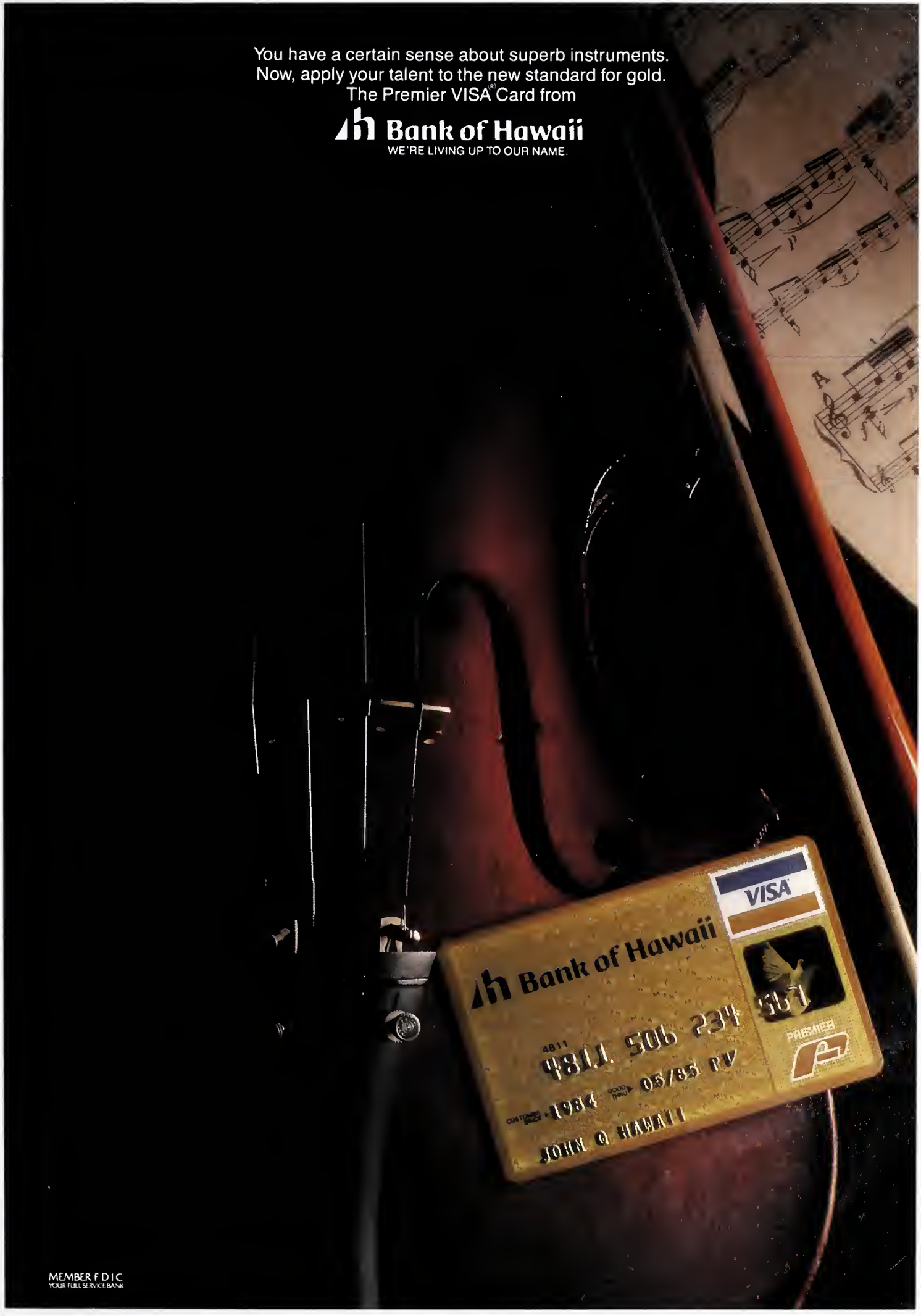
It would be an irrational and irresponsible act and would break the treaty in spirit, if not in letter. In the '80s such a move in any state to weaken marijuana laws would bring it dishonor, and rightly so! Hawaii, being a "producing" state with marijuana as its No. 1 cash crop, a consuming state, a tourist mecca for hedonists and addicts, and a major international drug trafficking center already is doing the U.S. and other countries a great deal of harm.

The clinical signs and symptoms of marijuana use, the characteristics of chemical dependency of the young, the stages of progression of this disease and the family responses to it, and some of the intervention and treatment methods found to work best now are available in a 1984 Year Book publication, "Drugs, Drinking and Adolescents," by pediatrician Donald Ian Macdonald, M.D. Many other useful papers and books are available through PRIDE, ACDE, and NIDA.

An inexpensive, rapid, accurate screening test for cannabinoids can back up or rule out clinical or parental suspicion of recent marijuana use. It remains positive up to 10 days after last use, and is available from EMIT Cannabinoid Assay, Syva Co., Palo Alto, Calif.

The Rest of the U.S.

Hawaii is 5-10 years behind the Mainland in finding solutions that really


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work. There is mounting evidence now that most of the U.S. is on the downswing of their massive drug epidemic, and that drug abuse, and all that goes with it, has waned in the past 5 years. The NIDA can provide answers to health questions (successful solutions) based on this evidence.

If we take the trouble to look, we can learn what to stop doing and why from the disastrous experience of failure from 1965-1978, and what to start doing and why from the experience of success from 1978-1984.

Alarming Growth Rate

Statistics from the U.S. National Institute on Drug Abuse are most informative: In 1962 only 3% of young adults (ages 18-25) had even tried marijuana. By 1982 64% had used it. Of those who said they regularly smoked marijuana, two-thirds reported smoking it 5 or more times a week. In 1982 one in 16 high school seniors reported smoking 2-4 marijuana cigarettes (joints) daily. This decrease has continued year by year from peak levels of use in 1978 when one senior in 10 smoked pot daily.

There was doubling from 1978-1982 of the percentage of seniors who saw a great health risk from marijuana use. Thus, the drop in use is being attributed mainly to the rise in concerned parent education and action groups and the growing recognition among young people themselves that smoking marijuana is very harmful.

With more than 4,000 parent groups springing up over the past 5 years, many more Americans are becoming aware, well-informed, and are taking effective action. Although it is encouraging to note the drop in daily use among seniors in the U.S., it must be recognized that for every senior using marijuana daily there are still larger numbers of students at every level who smoke it once or twice a week.

Control Just Begun

The job of control has just begun and the ramification of this problem and its solution are international in scope. Cocaine use is now a tremendous health problem, as are alcohol, tobacco, and other illegal drugs. There is much work to be done, but the solution is a sound one — and it works.

"Head" Shops

The problem of the incredibly subtle, aggressive, and powerful commercial and criminal drug underworld in the U.S. is being countermanded too, little by little. As the market is being reduced, and the populace and their leaders are better-informed, many newer methods of control are developing. As a result of actins initiated by parents' groups, "head" shops (i.e., outlets for drug promotional literature and paraphernalia) have been closed. In 32 out of the 50 states, laws banning the sale of drug paraphernalia have been passed. This needs to happen in Hawaii, too.

Children need protection from, or the banning of, "do drug" television shows, rock music concerts, movies, videotapes, and publications.

In the U.S., 11 states decriminalized marijuana in the mid-1970s, and all found a rapid acceleration in use by young people. These disastrous effects have kept the other 39 states from repeating this mistake and, what is more, moves to recriminalize marijuana use now are afoot. But these 11 states are finding it very hard to change back; the marked increase in user-advocates has created a vicious cycle. This experience should serve as a warning to other countries too: It doesn't work against pro-drug interests and it makes things far worse for the most vulnerable victims — the young.

The average user of marijuana lives in a world where drug availability, social inducements and peer group pressure, and one's own vulnerability all repeatedly are brought together. The main factor and necessary condition for becoming a multi-drug user, going on to become a heroin addict or other dangerous drug user, or even a youthful alcoholic is the progressive undermining of good judgment and control from the chemically disabling effect of marijuana on the brain.

In the case of alcoholism among youth — a relatively new phenomenon — the added factor is the anti-nausea effect of marijuana which makes possible the regular consumption of greatly increased amounts of alcohol than the body normally would retain without vomiting. Thus the most important focus — though not of course the only one — needs to be on the prevention of marijuana use by the young. Marijuana is the main "gateway" drug — no mistake about it.

"Druggie" News

Hawaii's young people continuously are being exposed to drug messages from the youth culture, the media, and those friendscwho not only would teach them about drugs, but share, give, and sell them drugs as well. This now is taking place at almost every age level, in school, and in families from every social stratum, and it involves all kinds of drugs. Mostly the kids' drugs are marijuana and alcohol. The idea is to get high. The scene includes "Sex and Drugs and Rock and Roll" as in the title of a current song. Many other popular songs this past 15 years contain pro-drug messages, as do movies, such as Cheech & Chong movies, currently available in theaters and video cassettes; magazines like High Times; certain television shows like Saturday Night Live; and many rock music shows and entertainments directed at the young.

There can be no question that our young people will find out about drugs; the question is would we prefer our children to get all their information from the drug users among their peers or to be put into the larger picture consistently by someone (e.g., the parents) who knows or is learning and sharing the real facts, and by teachers and doctors trained and willing to give information about drugs in a manner acceptable and understandable to each age group well before its initial exposure. If we, as parents, teachers, and doctors, and friends, don't provide the facts ourselves and set and enforce limits, we can be sure the epidemic will continue.

There'll be no truth, no limits, no values, and no honor among druggies. It's *not* an either/or situation. We can be sure that, even when we do provide the best in preventative education, our young people still will be exposed. But, and this is crucial, they will have an informed, confident, supported position to better enable them to resist peer group pressure and *just say no;* not even to try it once or get trapped into the drug-taking lifestyle. They will be more likely to find healthy, drug-free friends. Healthy peer group pressure will replace "do-drug" peer group pressure.

Parents must say *no* to drugs and drug experimentation for their kids and ensure that exposure to marijuana will not occur during the childhood and adolescent years, and that healthy, enjoyable alternatives are vigorously encouraged and developed where lacking.

Preventative educational methods and materials that work have been developed by many parents' groups on the Mainland. This is available to Hawaii's parents and, in fact, there should be growing interest in establishing a Hawaiian state base for a broad outreach of this constructive movement. Right now Hawaii's parents can get started.

Drug education and control should start in the home at the lower grades and then in the school — but this isn't enough. Problems with drugs and alcohol concern the whole country, the whole state, and other countries as well. They need to be responded to in a planned, cohesive manner by governments, health professionals, community organizations, parents, and media, as well as through special classes and community groups. The education needs to be positive and carry the message by word and example of *"Just say no to drugs and yes to life and life-promoting activities."*

How to Help?

1. As parents we can say no for our kids to any drugs unless prescribed by a physician for a definite illness and we can "clean up our own act."
2. We can start educating ourselves and our families by learning, reading, sharing material, being involved in community efforts, and by organizing parents and community groups. Fighting drug abuse



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3. We can, as professionals, assist parents and service organizations like the Lions' Clubs and other bodies to develop effective community programs on drug awareness and education mainly to back up parents and healthy youth. Hawaii residents should attend the annual conferences of PRIDE (Parents' Resources Institute for Drug Education) in Atlanta, Ga., and NFP (National Federation of Parents for a Drug-Free Youth) in Washington, D.C., held in March and September, respectively. The California Parents' Movement is active and successful; it has an excellent annual conference.
4. We also can make our voices heard against decriminalizing or legalizing marijuana, and opposing the continuation of soft attitudes. Letters help. Sharing this paper will help.

Summary and Conclusion

I have written this paper as a scientist and physician, as well as a mother, in the hope of helping and encouraging parents and citizens. As history shows, even seemingly small actions by lots of ordinary people *can move* mountains. Only we parents can do it, but we can't do it alone. We need all the help we can get from every constructive resource. The medical profession can, and should be, the most helpful resource of all.

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RESOURCES

PROCEEDINGS, PAPERS, SPEECHES, NOTES AND LETTERS

1. Proceedings: Symposium on Marijuana Research, 1978: Reims, France, (The Seventh International Congress of Pharmacology)
2. Proceedings: P.R.I.D.E. Southeastern Drug Conference: 1981 Atlanta, Georgia (P.R.I.D.E.: Parents' Resource Institute on Druge Education) "National Parents' Movement for a Drug Free Youth"
3. Proceedings: Annual P.R.I.D.E. Conference, 1982, 1983, Atlanta, Georgia.
4. Attendance: P.R.I.D.E. International Conference on Drugs, 1984, Atlanta, Georgia.
5. Proceedings: American Council on Marijuana Conference, 1981, Bethesda, Md., "Treating the Marijuana Dependent Person"
6. Statements of Richard S. Schweiker, Secretary and Edward H Brand Jr MD, Assistant Secretary of HHS (U.S. Department of Health and Human Services) HHS News, Feb. 3, 1983.
7. Marijuana and Health, 9th Report to the US Congress fromthe Secretary of HHS, 1982
8. "Highlights of Student Drug Use in America, 1975 through 1982" Annual High School Senior Survey 1975 through 1982. National Household Survey on Drug Abuse: The National Institute on Drug Abuse
9. Statement by C. Everett Koop, MD, Surgeon General of the U.S. Public Health Service, 1982.
10. Testimony of Lee 1. Dogoloff, Executive Director of the Ameircan Council on Drug Education, before the Senate Agriculture Committee September 30, 1982. (Formerly senior White House Drug Policy Advisor—latter part of Carter Administration)
11. Robert L Dupont MD PhD, American Council on Drug Education (Formerly head of N.1.D.A. (Papers and speeches)
12. Carlton Turner, PhD Senior White House Drug Policy Advisor, formerly director of the Research Institute of Pharmaceutical Sciences, University of Mississippi. (Letters, papers and speeches)
13. Helen Jones, author of soon to be published book on Marijuana (Letter and personal communication)
14. Peggy Mann, Journalist on drug subjects—Marijuana Update, Parents Against Pot and various books on Drugs and an excellent Readers' Digest series
15. Mary Jacobson, Chairman of the Board, N.F.P. (Letters and personal communication)
16. William Pollin, M.D., Chief N.1.D.A. (National Institute of Drug Abuse) (Letters, papers and speeches)
17. Dominic Di Carlo, Assistant Secretary of State for International Narcotics matters (letters, papers and speeches)

Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

LOCAL ACCREDITED PROGRAMS ONGOING

For a complete list of ongoing programs, please refer to the September 1984 issue of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department. A new complete list will appear in the March 1985 issue.

SPECIAL EVENTS

A list of forthcoming special events appeared in the December issue of the HAWAII MEDICAL JOURNAL, and will appear in subsequent issues.

Index to Hawaii Medical Journal Volume 43, 1984

Compiled by Virginia Tanji and John Hoover of Hawaii Medical Library

Title Keyword Index

Acupuncture. Acupunture practice in Hawaii, 43:242
Aging. Aging and the nervous system, 43:456
Altitude. House dust mites at altitude in Hawaii, 43:138
Asbestos. Developments in asbestos-related disease, 43:182
Assay. Human tumor stem-cell clonogenic assay—another failed cancer fad?, 43:374
Asthma. IgE and $IgG_{1, 2, 4}$ in desensitization of pollen asthma, 43:410
Atherosclerosis. Trace metals and atherosclerosis, 43:320
Atherosclerotic. Orbital bruits in atherosclerotic cerebrovascular disease—an Oriental phenomenon, 43:458
Auditory. Dementia: Early diagnosis with an endogenous event related potential (Auditory P300), 43:463
Biography. Garton E. Wall, M.D.—50 years of practice, 43:324
Biopsy. The utility of shave biopsy in office practice, 43:278
Bone marrow. Bone marrow metastases—26 years' experience, 43:220
Breast. Screening for breast cancer in Hawaii—further implications, 43:356
Cancer. Cancer in Hawaiians—compared with other races in Hawaii, 1978-1982, 43:350
Hyperthermia and cancer research, 43:362
Screening for breast cancer in Hawaii—further implications, 43:356
Carcinoma. The natural killer cell-interferon system in human carcinoma, 43:368
Cerebrotendinous. Cerebrotendinous xanthomatosis in Hawaii, 43:472
Cerebrovascular. Orbital bruits in atherosclerotic cerebrovascular disease—an Oriental phenomenon, 43:458
Cervical. Temporomandibular joint dysfunction masquerading as chronic cervical strain, 43:441
Chronically ill. Care of the elderly and chronically ill, 43:302
Clinical pathologist's easy chair. Cerebrospinal fluid—a re-examination, 43:194
Immunopathology of liver diseases, 43:10
Rheumatic diseases, 43:416
ASO, febrile agglutinins, ESR and CRP, 43:286
Dementia. Dementia: early diagnosis with an endogenous event-related potential (Auditory P300), 43:463
Dermatology. Anatomy of a dermatology practice—a year's experience on Kauai, 43:260
Desensitization. IgE and $IgG_{1, 2, 4}$ in desensitization of pollen asthma, 43:410
DRGs. DRGs and medical care—a message from the Medical Society of Delaware, 43:48
Drowning. Salt water drowning, 43:208
Dust. Effect of vacuum cleaning on house dust mites, 43:404
House dust mites at altitude in Hawaii, 43:138
Editorials. Aloha, Dr. Arnold, 43:257
Cancer detection & research in Hawaii, 43:348
Consultations, 43:97
Consultations: part 2, 43:137
Consultations: part 3, 43:192
Ethics and fraud, 43:66
Farewell to the troops,
Improving perinatal care, 43:97
Ken: our perceptive U.S. Senator, 43:297
Licensing exams, 43:389
Medical art exhibit, 43:98
Neurology and neurological surgery, 43:439
New lexicon needed, 43:378
The physician versus society, 43:297
PRO: why should we pull the Feds' chestnuts out of the fire?, 43:226
Project medvote, 43:348
The reference committee—part II, 43:99
The reference committee, 43:64
Reflections of a former "cancer control physician," 43:367
Reflections of a former Queen's Hospital resident, 43:459
The World Medical Association and medical ethics, 43:298
Elderly. Care of the elderly and chronically ill, 43:302
Endarterectomy. Carotid endarterectomy: Complication rate at Queen's Medical Center, 1981-1983, 43:186
Epidermal. Pseudomonas epidermal necrolysis, 43:74
Evaluation. The IME (Independent Medical Evaluation), 43:443
Fiji. The Fiji School of Medicine—a brief history, 43:314

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Hawaii Medical Association. Summary of House of Delegates actions—127th annual meeting, Hawaii Medical Assn., October 8-10, 1983, 43:34
Hawaiians. Cancer in Hawaiians—compared with other races in Hawaii, 1978-1982, 43:350
Heart. Pediatric heart surgery at Queen's Medical Center, 43:7
Hemorrhage. Mediastinal hemorrhage—diagnostic and therapeutic problems, 43:152
Hilo Hospital. Early experience with intravenous streptokinase . . . acute myocardial infarction in Hilo Hospital, 43:394
Homicides. Epidemiologic patterns of homicides in the City and County of Honolulu, 1977-1983, 43:230
Hormone. Hormone treatment clinic for transsexuals, 43:142
Hyperthermia. Hyperthermia and cancer research, 43:362
Independent. The IME (Independent Medical Evaluation), 43:443
Index. Index to Hawaii Medical Journal, Volume 42, 43:25
Informed consent. Mastectomy informed consent, 43:63
Interferon. The natural killer cell-interferon system in human carcinoma, 43:368
Kauai. Anatomy of a dermatology practice—a year's experience on Kauai, 43:260
Letters to the editor. FMGs, 43:439
Medical art exhibit, 43:341
More on saltwater drowning, 43:218
Resolution regarding Hale Mohalu . . ., 43:126
Still more on saltwater drowning, 43:341
A writer's response, 43:341
Liquid. Liquid crystal contact thermography in the clinical evaluation of traumatic low back pain, 43:480
Low back. Liquid crystal contact thermography in the clinical evaluation of traumatic low back pain, 43:480
Marine. Poisonous marine plants and animals —therapeutic guidelines, 43:166
MAST. Military Assistance to Safety and Traffic (MAST) and Helicopter Medical Evaluation (MEDEVAC), 43:200
Mastectomy. Mastectomy informed consent, 43:63
Medevac. Military Assistance to Safety and Traffic (MAST) and Helicopter Medical Evaluation (MEDEVAC), 43:200
Mediastinal. Mediastinal hemorrhage—diagnostic and therapeutic problems, 43:152
Medical care. DRGs and medical care—a message from the Medical Society of Delaware, 43:48
Medical history in the Islands. John A. Burns School of Medicine, University of Hawaii, 43:133
Leprosy in Hawaii, 1889-1976, 43:328
Some early physicians of Hawaii—1800s, 43:250
Metals. Trace metals and atherosclerosis, 43:320
Metastases. Bone marrow metastases—26 years' experience, 43:220
Military. Military Assistance to Safety and Traffic (MAST) and Helicopter Medical Evaluation (MEDEVAC), 43:200
Mites. Effect of vacuum cleaning on house dust mites, 43:404
House dust mites at altitude in Hawaii, 43:138
Myocardial infarction. Early experience with intravenous streptokinase . . . acute myocardial infarction in Hilo Hospital, 43:394
Intracoronary streptokinase for acute myocardial infarction, 43:390
Natural killer cell. The natural killer cell-interferon system in human carcinoma, 43:368
Necrolysis. Pseudomonas epidermal necrolysis, 43:74
Neonatal. Neonatal polycythemia in Hawaii, 43:398
Nervous. Aging and the nervous system, 43:456
Neurology. Neurology and neurosurgery in Hawaii over 45 years—a personal reminiscence, 43:444
Neurosurgery. Neurology and neurosurgery in Hawaii over 45 years—a personal reminiscence, 43:444
Newborn. Resuscitation of the newborn—a practical approach, 43:79
Orbital. Orbital bruits in atherosclerotic cerebrovascular disease—an Oriental phenomenon, 43:458
Pain. Liquid crystal contact thermography in the clinical evaluation of traumatic low back pain, 43:480
Parasitic. Parasitic infestations in Southeast Asian refugees, 43:12
Pediatric. Pediatric heart surgery at Queen's Medical Center, 43:7
Perinatal. Improving perinatal knowledge and care —a self-instruction program, 43:100
Plants. Poisonous marine plants and animals —therapeutic guidelines, 43:166
Poisoning. Fatal sardine poisoning, 43:114
Poisonous. Poisonous marine plants and animals —therapeutic guidelines, 43:166
Pollen. IgE and $IgG_{1, 2, 4}$ in desensitization of pollen asthma, 43:410
Polycythemia. Neonatal polycythemia in Hawaii, 43:398
President's page. Days of plenty, days of want, 43:59
Pseudomonas. Pseudomonas epidermal necrolysis, 43:74
Public relations. Ethical and practical public relations for the physician, 43:300
Queen's. Carotid endarterectomy: complication rate at Queen's Medical Center, 1981-1983, 43:186
Pediatric heart surgery at Queen's Medical Center, 43:7
Refugees. Parasitic infestations in Southeast Asian refugees, 43:12
Resuscitation. Resuscitation of the newborn—a practical approach, 43:79
Saltwater. Saltwater drowning, 43:208
Sardine. Fatal sardine poisoning, 43:114
Screening. Screening for breast cancer in Hawaii—further implications, 43:356
Shave. The utility of shave biopsy in office practice, 43:278
Southeast Asian. Parasitic infestations in Southeast Asian refugees, 43:12
Spherocytosis. Hereditary spherocytosis and thalassemia, 43:180
Stem-cell. Human tumor stem-cell clonogenic assay—another failed cancer fad?, 43:374
Streptokinase. Early experience with intravenous streptokinase . . . acute myocardial infarction in Hilo Hospital, 43:394
Intracoronary streptokinase for acute myocardial infarction, 43:390
Surgery. Pediatric heart surgery at Queen's Medical Center, 43:7
Temporomandibular. Temporomandibular joint dysfunction masquerading as chronic cervical strain, 43:441
Thalassemia. Hereditary spherocytosis and thalassemia, 43:180
Thermography. Liquid crystal contact thermography in the clinical evaluation of traumatic low back pain, 43:480
Thrombocytopenia. Thyrotoxicosis associated with thrombocytopenia, 43:156
Thyrotoxicosis. Thyrotoxicosis associated with thrombocytopenia, 43:156
Trace. Trace metals and atherosclerosis, 43:320
Transsexuals. Hormone treatment clinic for transsexuals, 43:142
Vacuum. Effect of vacuum on house dust mites, 43:404
Xanthomatosis. Cerebrotendinous xanthomatosis in Hawaii, 43:472.

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Author Index

Anfosso F, 43:410
Arkoff S, 43:200
Armstrong RW, 43:230
43:341
Arnold HL Jr., 43:257
Au T, 43:389
Batkin S, 43:456
Bogden P, 43:186
Boychuk RB, 43:79, 97, 100
Burch TA, 43:350
Charpin J, 43:410
Chien YK, 43:410
Ching CY, 43:368
Ching NP, 43:368
Cloward RB, 43:444
Cooper MA, 43:142
Couch RD, 43:114
Dodge FA, 43:126
Elizaga FV, 43:180
Elpern DJ, 43:260
Feldman A, 43:362
Ferguson P, 43:12
Fergusson DJ, 43:390
Fournier-Massey GG, 43:138
Fukunaga FH, 43:10, 194, 286, 320, 416
Fukunaga, KK, 43:320
Furumizo RT, 43:138
Fusetani N, 43:114
Gilbert FI Jr., 43:356
Goodman MJ, 43:356
Hall TC, 43:348, 374
Hinman RC, 43:472
Hom BL, 43:220
Itagaki RK, 43:390
Izumi AK, 43:278
Jasinski DR, 43:97, 257, 367, 378, 459
Jim EL, 43:368
Jim RT, 43:156
Judd CS Jr., 43:133, 250, 328
Kam CC, 43:443
Kramer KJ, 43:12
Lawler SS, 43:152
Liberman J, 43:300
Lim DI, 43:394
Loh KK, 43:368
Low G, 43:356
Massey DG, 43:66, 138, 182, 404
Massey JE, 43:404
Matsuoka NS, 43:230
McKinny WR, 43:12
McNamara JJ, 43:208
McPheeters GO, 43:74
Melton RJ, 43:114
Mills GH, 43:302
Moreno-Cabral RJ, 43:7
Nakano KK, 43:480
Nelson JC, 43:100
Odom CB, 43:218
Oishi N, 43:368
Okihiro MM, 43:439, 458
Pearce JW, 43:463
Penick M, 43:200
Pennington AH, 43:314
Pettett PG, 43:398
Pinkerton S, 43:348
Puapongsakorn P, 43:180
Randall JE, 43:114
Rawlings JS, 43:398
Reeve R, 43:152, 341, 390
Reppun JIF, 43:64, 97, 99, 137, 192, 226, 297, 324
Siddiqui WA, 43:12
Sims JK, 43:114, 166, 200
Straehley CJ, 43:74
Taira M, 43:341
Taira MM, 43:98
Tan AK, 43:439
Teraoka JK, 43:278
Trott EE, 43:242
Uehara S, 43:59
Weiner RS, 43:114
Wiswell TE, 43:398
Won WW, 43:441
Wong LL, 43:208
Wynen A, 43:298
Yim DW, 43:368
Zbiciak C, 43:200

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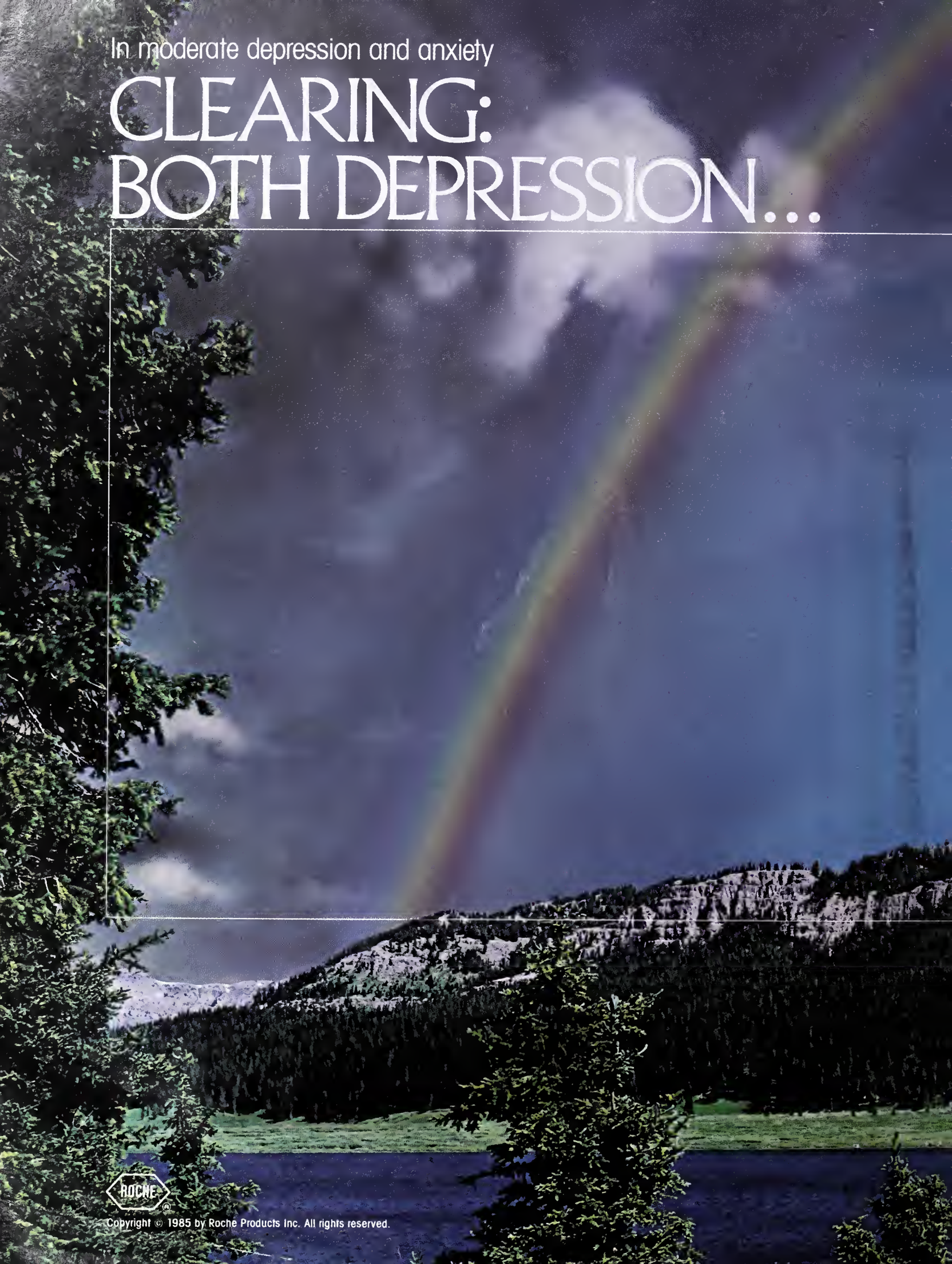
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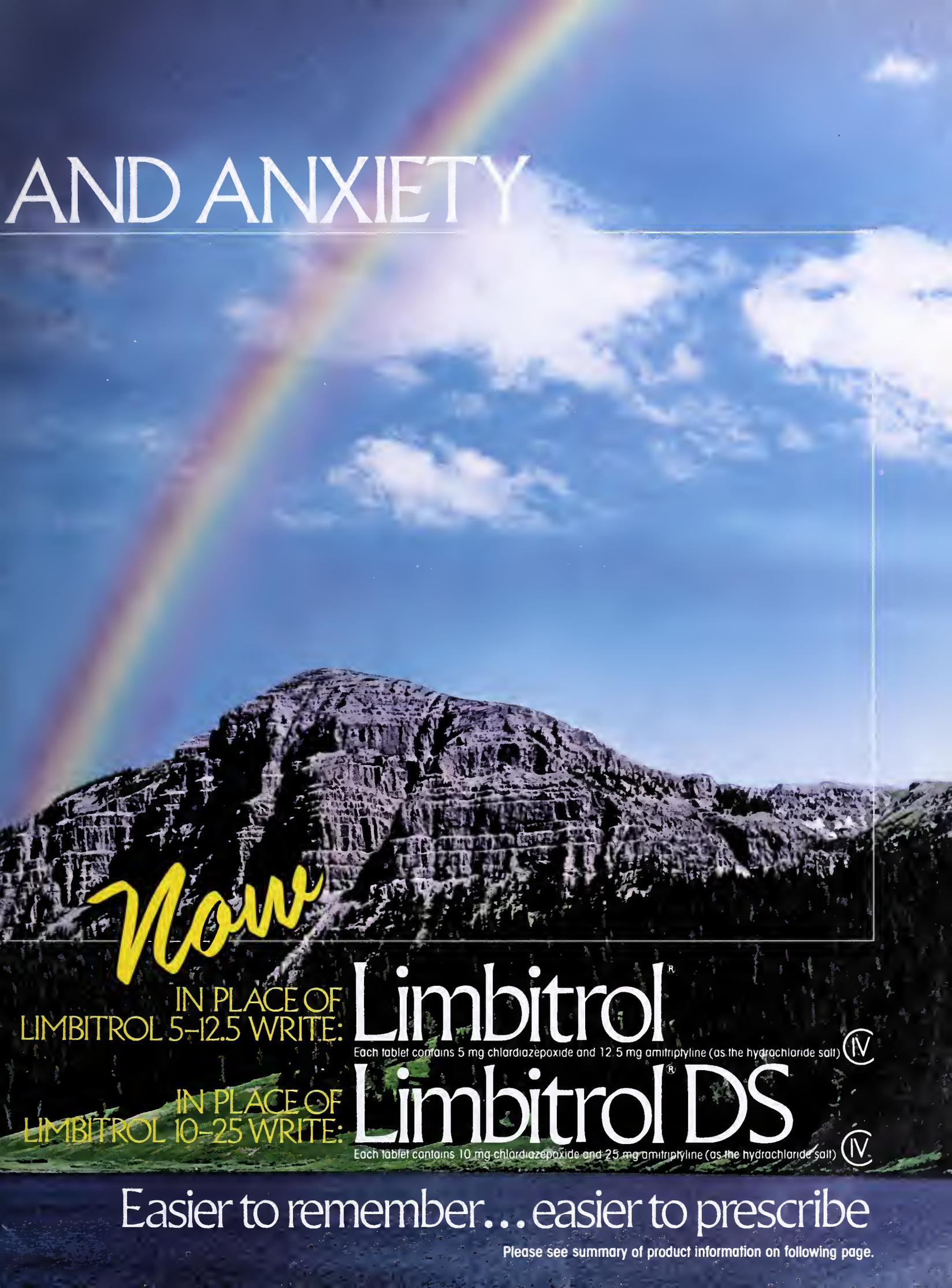
CONTENTS

Editorial: 46
The Dilemma in CME
J.I. Frederick Reppun
HMA Position Statement 46
Mills Honored by AMA 46
Recapitulation of House of Delegates Actions—128th Annual Meeting of HMA 47
1984 Annual Meeting Awards 50
Clinical Applications of the Argon Laser 52
Norman Goldstein, M.D., F.A.C.P., and Jasmin T. Flores, P.A.-C., M.P.H.
Photos from HMA's Annual Meeting on Kauai 58
Treatment of Clonorchis Sinensis in Hawaii's Laotian Population—Experience with Praziquantel 63
Michael J. O'Leary, M.D., M.P.H., John T. Berthiaume, M.D., and Vannara Sakbun
Human Brucella Canis Infection in Hawaii 66
Mark K. Lum, M.D., Francis D. Pien, M.D., M.P.H., and David M. Sasaki, D.V.M.
Continuing Medical Education 70
News & Notes 72

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (e.g , operating machinery, driving).

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The following list includes adverse reactions not reported with Limbitrol but requiring consideration because they have been reported with one or both components or closely related drugs.
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Psychiatric Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido
Neurologic Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns
Anticholinergic Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract
Allergic Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus
Hematologic Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia
Gastrointestinal Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue
Endocrine Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion
Other Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling
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The Dilemma in CME

Joe Harrison, M.D., of Lahaina, Maui, seems to be a dedicated physician — dedicated to bringing knowledge to his colleagues. He is a general practitioner with a particular interest in allergy. His fervor in putting on several symposia a year on Maui is difficult to understand, in view of the many stone walls against which he continues to bang his head in attempting to get Category 1 accreditation for the participants.

The HMA's CME Committee also has been struggling with the basic problem of who should do the accrediting — first under Nadine Bruce, its previous chairman, and currently under Bal Raj Mehta. This is Joe's problem.

At its regular meeting in January 1985, the committee decided, with unanimity, to request of the HMA Council the funds that have been budgeted, in order to become fully accredited by the ACCME as an organization qualified to accredit not only intrastate programs (which the committee is currently able to do), but also to be able to accredit the programs here that can be advertised nationally and attract physicans from both far and near. Obviously, the larger the body of registrants for the particular course or seminar, the greater will be its income from fees, etc., and the easier to obtain speakers and faculty of great renown and from far places. The HMA would have to pay the ACCME's fee of several thousand dollars, in order to obtain this qualification.

To compensate for this outlay of HMA dollars, the committee will seek authority from the Council to charge more for accrediting the local program and institutions, at least enough to "break even," and perhaps a bit more in order to build up a CME fund.

It is to HMA's benefit to provide this educational service, not only to its membership but also to the rest of Hawaii's medical community. As it stands now, the university's School of Medicine is the only medical institution in the state that can do this. In view of the state statute that mandates 40 hours of Category 1 study every 2 years in order for a physician to get or to renew his or her license to practice medicine, such an HMA service should be self-evidently valuable to all.

Joe Harrison reports that 22 symposia of one sort or another are offered on Maui in a year, none of which is sponsored locally! An example is a forthcoming one put on by and offering accreditation from the University of Michigan School of Medicine. Local physicians, of course, are encouraged to attend, pay the fee, and receive Category 1 credits. However, much of the larger attendance comes from the Mainland Koleas, who can deduct the fee and the expenses of a sunny vacation on the beaches of Kaanapali with IRS consent. (The amorality of the whole spiel could be the subject of a separate editorial!)

There is nothing really wrong with the fact that the Timbuktu School of Medicine, or the Bohunk Medical Society, can pay the ACCME its high fee and then can accredit these often very good and worthwhile symposia on Maui, or Kauai, or wherever; the local docs can benefit too and accumulate credits. However, under current ACCME rules, the HMA may not accredit any institution locally that puts on a program — no matter how prestigious — that has national visibility and attraction, with some exceptions. As a result, local sponsors, such as Joe Harrison's Symposium Maui, Inc., must apply directly to Chicago, seat of the ACCME, or go through the University of Hawaii School of Medicine. Both of these accrediting bodies require high fees, which small symposia cannot afford. Large local sponsors also have the problem because they have to advertise nationally in order for the symposium to succeed financially.

J.I. Frederick Reppun, M.D.

Hawaii Medical Association Position Statement on Heart-Lung Transplantation

The Hawaii Medical Association supports advancements in medical skills and technology.

The heart-lung transplant procedure is recognized as another major advance in medical skills and technology. As more data are being accumulated about its efficacy and safety, we anticipate it will take its place with other similar procedures as one of the accepted life-saving and life-prolonging procedures available. Continuing clinical investigation will overcome the remaining medical and non-medical hurdles that slow advancement in the area of organ transplants. Medical efficacy decisions and investigational or established status should be kept separate from the socioeconomic ones. The Hawaii Medical Association will be willing to participate in decisions regarding medical efficacy and investigational or established status.

The HMA feels more studies should be undertaken to determine if this procedure and other like procedures are the wisest way to spend our limited medical resources.

Proposed by
HMA Medical, Ethical, Moral, and Legal Concerns Committee
Adopted by
HMA Council June 1, 1984

Mills Honored by AMA



December 2, 1984, will be remembered in HMA history as the day Dr. George H. Mills received the American Medical Association's prestigious Benjamin Rush Award for Outstanding Citizenship and Community Service.

Presented annually to only one physician from throughout the United States, it's the first time the award has been given to a doctor from Hawaii. Dr. Mills received the award during the opening session of the AMA's 1984 Interim House of Delegates Meeting in Honolulu.

In addition to being medical doctor for both Kamehameha Schools and Maunalani Hospital, a former state senator, and president emeritus of Hawaiian civic clubs, Dr. Mills has been actively involved in many state and national boards dealing with health and education. He served as Hawaii's delegate and alternate to AMA, and subsequently served on the organization's Legislative Council, Judicial Council, and elected member of the Board of Trustees. He is also past president of the Honolulu County Medical Society and Hawaii Medical Association.

HMA was extremely proud to submit this nomination and extends sincere congratulations to Dr. George H. Mills.

Recapitulation of House of Delegates Actions—

128th Annual Meeting of the HMA

The 128th Hawaii Medical Association Annual Meeting took place November 9-11, 1984, at the Kauai Surf Hotel, Lihue, Hawaii. The House of Delegates met to consider the annual reports of commissions and committees, reports from leadership, and resolutions submitted by the members of the Association. Three reference committees were appointed to hear testimony submitted by interested members. The reference committes presented their recommendations to the House on Sunday, November 11, 1984.

Secretary **Russell Stodd** called the roll. Present were:**Sakae Uehara, William Hindle, Calvin Kam, Russell Stodd, Robert Irvine, Paul Esaki, Steven Moser, Thomas Au, Philip Hellreich, Neal Winn, Herbert Uemura, Arch Wigle, Peter Kim, John James, William Iaconetti, Milton Howell, J. Alfred Burden, William Dang, George Goto, Marion Hanlon, George Mills, Ben Hur, Richard Lundborg, Thomas Grollman, Andrew Don, Donna McCleary, William Mitchell, Helen Percy, Minolu Cheng, Jeanette Chang, Russell Hicks, John Houk, Charles Judd, Jr., Owen Kaneshiro, Frederick Reppun, Stanley Shimoda, John Spangler, James Stewart, Helen Sullivan, Mary Flynn, William Davis, Charlotte Florine, Norman Goldstein, Leonard Howard, Robert Marvit, Paul McCallin, William McKenzie, John Wellington, Joseph Young, Philip McNamee, John McDonnell, Walter W.Y. Chang, James Lumeng, William Kepler, Patrick Walsh, Douglas Massey, Robert Palmer, Glenn Pang, Joel Sims,** and **E. Lee Simmons.** Also present were: Legal Counsel **V. Thomas Rice,** Auditor **Dave Riley,** AMA President **Joseph F. Boyle,** and HMA Auxiliary President **JoAnn Lundborg.**

The first meeting of the House of Delegates was called to order by Speaker **Herbert Uemura** on Friday, November 9, at 1:35 p.m. **Marion Hanlon** gave the invocation, followed by a moment of silence in respect for 11 members deceased in 1984. Their names and years of membership follow: **Robert Benson** 44, **Harold Chandler** 57, **Richard Chang** 28, **Robert Faus** 61, **Howard Honda** 47, **Junichi Matsumura** 53, **Satoru Matsuyama** 49, **N. Fred Myers** 4, **Masato Ohtani** 44, **Haruto Okada** 53, and **Tsuneichi Shinkawa** 57.

Russell Stodd, chairman of the convention, and **Steven Berman,** chairman of the scientific program, were introduced to the House. **Clarence Avery,** M.D., president of the California Medical Association, was introduced as a welcome guest.

President Uehara presented the Speaker's gavel to **Herbert Uemura** to conduct the meeting. **Marion Hanlon** was appointed Parliamentarian. Appointed Sergeants-at-Arms were **Philip McNamee,** Honolulu, and **Yonemichi Miyashiro,** Kauai. The minutes of the 127th HMA Annual Meeting were approved as published.

President Uehara introduced **Joseph F. Boyle,** AMA President, who gave a stirring opening address. (Copies of the speech

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Milton Howell, vice-speaker, called on **Neal Winn,** chairman of the nominating committee, to present the 1984-85 slate of nominees for all elective offices. A motion was made, seconded, and passed that the slate be accepted and nominations closed; the election was to be held Sunday, November 11, 1984, as the last order of business of the House of Delegates.

President Uehara announced that an additional 2-page report on the Physicians Review Organization (PRO) was to be added to his "President's Report" (pages 12-13 of handbook). The PRO report outlined the action taken by Council on November 5, 1984: To proceed with negotiations with the state of Arizona, which was awarded the PRO contract by Health Care Financing Agency (HCFA). Arizona will work with Hawaii physicians (the panel of review physicians to be initially organized by HMA) to identify problems in Hawaii, provide technical assistance, administration, and communications and develop the goals and objectives required by HCFA. Beginning immediately, interim agreements were to be made with hospitals in the state of Hawaii. Formal documents would follow, over a period of the next 2 months. HCFA has given Arizona 6-9 months to develop the data base for Hawaii.

William Hindle, chairman of the Hawaii Medical Association's ad hoc Strategic Planning Task Force (SPTF), presented a report on the SPTF activities thus far. The SPTF has been deliberating on the direction HMA should follow for the next several years, in order to establish missions and goals; it has identified major areas of concern that coincide with its missions. **Ted Helmer,** planning consultant-UH, has been working with the group. Considerable data has been collected through questionnaires to officers, Council, members, non-members, and as a result of personal interviews with key community leaders. Priorities need to be established, with possible re-structuring of the commission/committee system. Resources for the long term need to be explored.

Annual reports of the committees and commissions, reports from leadership, and resolutions submitted by the membership were referred to reference committees. The reference committees were appointed as follows: Miscellaneous Business: **James Stewart** (chairman), **Paul Esaki, John Spangler,** and **Helen Sullivan;** Public Health: **Russell Hicks** (chairman), **Jeanette Chang, Andrew Don,** and **Ben Hur.** The reference committee chairmen were requested to follow the posted agenda, and to publish any changes in advance.

The House of Delegates recessed at 2:45 p.m. on November 9 and was reconvened on November 11 at 1:35 p.m., to act on the recommendations of the reference committees and to hold the official elections. The following reports were adopted:

THE REPORT OF THE PRESIDENT, and his recommendations: (1) That the Hawaii delegation to the AMA be chaired by the senior HMA delegate; (2) That the policy of the HMA be to establish financial reserves and that the Finance Committee come up with a plan of implementation to be presented to the Council.

THE REPORT OF THE TREASURER AND FINANCE COMMITTEE, with their recommendations: (1) That dues for 1985 be set at $490 per member; (2) That the balanced budget for 1985 be accepted; (3) That the auditors for HMA for 1985 be Alexander Grant & Co.; (4) That the HMA be paid $110,000 by HCMS for services rendered; and, (5) That HMA and HCMS jointly conduct a time study to review and update this figure for 1986.

THE REPORTS OF THE EDITORS, HMJ: The House adopted the reports of Founding Editor **Harry L. Arnold, Jr.** and Managing Editor **Doris Jasinski,** and recommended the reports be filed with much appreciation for the long and dedicated service of Dr. Arnold, and commendation to Dr. Jasinski for the many long hours devoted to the varied editorial chores of the JOURNAL.

THE REPORT OF EXECUTIVE DIRECTOR **Jon Won,** and his recommendations: (1) That a balanced budget for 1985 be adopted; and (2) That the matter of a contingency plan for professional liability insurance be referred to an appropriate committee.

THE REPORT OF THE COMMUNITY RESEARCH BUREAU and its recommendation that it continue as a 501(c)3 arm of HMA.

THE REPORT OF THE HAWAII FOUNDATION FOR MEDICAL CARE and its recommendations: (1) That the Hawaii Foundation for Medical Care continue to be available to HMA for appropriate tasks; and (2) That the bylaws be revised to delete PSRO as a major project of the Hawaii Foundation for Medical Care.

UNDER THE COMMISSION ON ADMINISTRATIVE SERVICES, the reports and recommendations of the several committees as adopted follow: *A&T Printing, Inc.:* To have continued support from HMA; *Building Committee:* To proceed with the sale of the building; *Insurance Committee:* That it work closely with HMA's broker to increase membership in HMA-Protection Plus Program; *Pension Committee:* To refer consideration of an endowment program for HMA members to the Finance Committee, with regard to its feasibility; *Computer Committee:* (1) That the HMA membership be surveyed to determine the needs of physicians in the area of computers and computer systems for medical offices; and (2) That the committee concentrate on establishing educational projects to keep the membership updated in this rapidly advancing field.

UNDER THE COMMISSION ON COMMUNITY AND PROFESSIONAL RELATIONS, Commissioner **George Mills** was commended for his outstanding leadership, for the way he organized the work of the committees under his jurisdiction, and for his reports to the Council. Commissioner Mill's recommendations were adopted: (1) That SPTF consider establishment of a commission on medical services to include committees on delivery systems, insurance programs, prospective payment, DRGs, costs, technology, etc. These important areas are either not being addressed or are at present fragmented within the HMA structure; (2) That all commissioners and committee chairmen be appointed for 3 years, with their status reviewed annually; (3) That no committee chairman or commissioner serve for more than two 3-year terms; and (4) That these matters be referred to SPTF. The various committees' recommendations that were adopted follow: *Continuing Medical Education* (CME) recommendations and budget request: (1) That the committee submit requests on an annual basis to the HMA House of Delegates concerning accreditation survey fees and co-sponsorship fees; (2) That accreditation survey fees be increased as follows: Hospital survey fee from $250 to $375; specialty society fee from $100 to $150; (3) That co-sponsorship fees in 1985 remain at the rates approved early in 1984 by Council: (a) $20 non-refundable registration fee, required from all programs whether or not they charge tuition, and (b) equivalent of one M.D. tuition fee required for all programs charging such fees. The budget request included the survey fee for reaccreditation of HMA by ACCME, airfare and room/board for two ACCME site surveyors from Illinois, and airfare, room/board for one HMA physician to travel to Chicago for a reaccreditation reverse site visit; total estimated budget $4,400. *Medical, Ethical, Moral, and Legal Concerns*: (1) That HMA assist in the development of ethics committees in all hospitals within the state; (2) That the committee continue to monitor "living will" legislation and study the Durable Power-of-Attorney (DPA) as an alternative; (3) That the committee monitor further legislative proposals relating to organ transplants. Also approved was a budget request for inter-Island airfares for participants (committee members) in hospital ethics committee discussions: $500. *Health Manpower*: (1) That the committee should develop an accurate means of assessing HMA membership opinion regarding the issue of the existence of the University. An HMA policy statement should then be issued for use at any legislative hearing in which HMA may be called to testify; (2) That the HMA should continue to work with the University of Hawaii School of Medicine in updating manpower data in the State. *Hawaii Health Insurance (HHI)*: (1) That the committee be retained for at least one more year to see if its 2 inherited subcommittees will produce any worthwhile ideas; (2) That the HHI consider func-

tioning in another area regarding health care. *Business Medicine Coalition*: That this committee be dissolved.

UNDER THE COMMISSION ON INTERNAL AFFAIRS, the recommendations of the committees, as adopted, follow: *Bylaws:* (1) Notice of amendments to be broadcast to the membership 30, rather than 60, days in advance; (2) The establishment of a Pension Committee; (3) Five-year staggered terms for members of the Finance Committee; (4) Any reference to gender shall include both genders.

UNDER THE COMMISSION ON LEGISLATION, the recommendations of the several committees, as adopted, follow: *Legislative:* (1) To continue with its present format as reaffirmed by the Council; (2) The 1984-85 budget to be the same: Lobbyist $1,000 and Reception $700; (3) To consider meeting earlier in advance of the next legislative session in order to consider proposing bills for introduction by appropriate legislators. *Medical Malpractice Law:* To continue to search for means of legislative reform of the malpractice tort situation including: (1) Repeal of the joint and several liability clause; 2) Other methods for out-of-court patient reimbursement in the event of untoward serious injuries; and (3) Review of various legislative proposals up before other states and before the U.S. Congress regarding these subjects.

UNDER THE COMMISSION ON MEMBERSHIP SERVICES, the recommendations of the various committees, as adopted, follow: *Publications:* (1) That **J.I. Frederick Reppun** be appointed editor of the HAWAII MEDICAL JOURNAL; (2) That **Doris Jasinski** continue as managing editor; (3) That HMA continue its relationship with Crossroads Press, Inc., as publisher of the HAWAII MEDICAL JOURNAL and of the Directory of Hawaii Physicians; (4) That HAWAII MEDICAL JOURNAL subscription rates remain the same for 1985: HMA members $10, non-members $15; (5) That non-members again be invited to purchase a listing in the 1985-86 Directory at a charge of $50. *TV-Radio:* That the Hawaii Medical Association continue its liaison and participation in the Hawaii Public Television's "Body Talk" program. *Public Affairs/Media Response:* News media awards: $800; Science Fair: $200; and a one-time expense for a perpetual plaque for the Physician of the Year: $500.

UNDER THE COMMISSION ON PUBLIC HEALTH, the commissioner's recommendations were adopted: (1) That the *Sports Medicine Committee* be reactivated to present the sports medicine seminar, as in the past several years; and (2) That the *Substance Abuse and Pharmacy committees* be combined into one committee. *Jail Health Committee:* (1) That the committee continue to serve in an advisory capacity to DSSH, Corrections Division; (2) That the HMA assess, during the next year, the feasibility of joining the National Commission on Correctional Health Care, with intent to provide national health care accreditation for the correctional facilities in Hawaii.

UNDER THE COMMISSION ON SOCIOECONOMICS, the recommendations of the several committees, as adopted, follow: *Fee Survey:* To continue to tabulate new procedures and give them relativity. *Health Care Costs:* To set up educational meetings in the community for discussion of the causes of, and possible solutions to, the rising cost of health care. *Medicaid/Medicare:* (1) That there be a follow-up on Straub's HMO study; (2) That dialogue with DSSH be continued on mutual problems. *Workers' Compensation:* (1) That the HMA submit an annual report to the Department of Labor, Workers' Compensation Division, by September 1 of each year, listing any additions, deletions, or revisions to the codes listed in the medical fee schedule; (2) That the Workers' Compensation Committee be directed to represent the HMA in discussions on the Haldi Report and to work with the HMA Legislative Committee in preparing testimony for the hearings that will be held in 1985.

RESOLUTIONS ADOPTED

RESOLUTION NO. 1 (Re: Medical Doctor (M.D.) as State Director of Health)

RESOLVED, that the Hawaii Medical Association (HMA) adopt the position that the Director of the Hawaii State Department of Health be a medical doctor (M.D. or D.O.), licensed in the State of Hawaii, and who also holds a Master's Degree in Public Health (M.P.H.) or its equivalent or higher public health degree; and be it further

RESOLVED, that a copy of this resolution be submitted to the Governor of the State of Hawaii as the appointing authority for the Directorship of the DOH; and be it further

RESOLVED, that a copy of this resolution be submitted to the Hawaii State Senate as the confirming authority for the appointment of the Hawaii State Department of Health Director.

RESOLUTION NO. 3 (Re: Statewide Medical Examiner System)

RESOLVED, that the Hawaii Medical Association (HMA) adopt the position that it support a statewide medical examiner's system so that adequate support is available statewide; and be it further

RESOLVED, that the HMA Legislative Committee cause the introduction again of a bill into the Hawaii State Legislature that creates an appropriate statewide medical examiner's system.

RESOLUTION NO. 6 (Re: Transfer of HCMS Physicians' Committee to Hawaii Medical Association)

RESOLVED, that the HMA assume responsibility for appointment of a statewide Physicians' Committee, with representation from each component medical society.

RESOLUTION NO. 7 (Re: Creation of Hospital Medical Staff Section in HMA)

RESOLVED, that the HMA amend its bylaws at the earliest possible opportunity to create a formal Hospital Medical Staff Section within the HMA with appropriate representation on the HMA Council and in the HMA House of Delegates; and be it further

RESOLVED, that hospital representatives to this Section be active, voting members of their medical staffs with clinical privileges; and be it further

RESOLVED, that hospital representatives to this Section and representatives from this Section to the HMA House of Delegates and the HMA Council be members of the HMA; and be it further

RESOLVED, that until the HMA bylaws are so amended to include the representation and participation of the Hospital Medical Staff Section of the HMA, the HMA leadership establish this organization on an ad hoc committee basis.

RESOLUTION NO. 8 (Re: HCMS/Medical-Legal Interprofessional Courtesy Agreement)

RESOLVED, that the Hawaii Medical Association endorse the concept of the Interprofessional Courtesy Agreement and support its ratification for the physicians of the State of Hawaii, contingent upon the approval by the governing bodies of each component society; and be it further

RESOLVED, the document will similarly be presented to the appropriate governing body of the Hawaii Bar Association for its review and/or approval.

RESOLUTION NO. 9 (Re: Discontinuation of HMA Committees)

RESOLVED, that the Alternate Health Care, Block Grants, Business/Medicine Coalition, and Disaster committees of the HMA be discontinued. An additional recommendation with this resolution which was adopted was that the functions of the Alternate Health Care and Disaster committees be assumed by the Public Safety Committee.

SUBSTITUTE RESOLUTION NO. 10 (Re: Prevention of Individuals Driving While Intoxicated)

RESOLVED, that the Hawaii Medical Association strongly support legislation designed to identify all intoxicated drivers, to assess for the presence of the disease of alcoholism and to mandate appropriate therapy; and be it further

RESOLVED, that the Hawaii Medical Association continue its support for appropriate and effective legal sanctions for all individuals driving under the influence of intoxicating substances; and be it further

RESOLVED, that this resolution be referred to the Legislative Committee for implementation.

Many reports of officers, commissioners, committees, and component societies, which included no recommendations and required no action by the House, were accepted for filing.

NOMINATING COMMITTEE

The Nominating Committee presented the following slate of nominations:

President-Elect	**Leonard Howard**
	Russell Stodd
Secretary	**John Kim**
	James Lumeng
AMA Delegate	**William Iaconetti**
	Richard Lundborg
Alternate AMA Delegate	**William Hindle** (President-elect)
Councilor from Kauai	**Peter Kim**
Councilor from Maui (1-2 years & 1-1 year)	**R. Joe Harrison**
	Donna McCleary
Councilors from Honolulu	
Vincent Brown	**Douglas Bell, II**
Paul DeMare	**Robert Clingan**
Eugene Matsuyama	**Martha Lou Hefley**
Stephen Wallach	**Myron Shirasu**
Joseph Young	**James Young**
Speaker of the House	**Herbert Uemura**
Vice Speaker of the House	**Milton Howell**
	Edwin Montell
Resident Physician Delegate to House	**Peter McNally**
	Charles Novak
	Nancy Pace
	Ronald Wong
Student Delegate to House	**John Matsuura**
	Dean Inouye

Those elected and installed for 1984-85 were:

President	**William H. Hindle**
President-elect	**Russell T. Stodd**
Secretary	**James Lumeng**
AMA Delegates	**William Iaconetti**
	Calvin C.M. Kam
Alternate AMA Delegates	**William H. Hindle**
	Russell Stodd
Councilor from Kauai	**Peter Kim**
Councilor from Maui 2-yr.	**Donna McCleary**
1-yr.	**R. Joe Harrison**
Councilors from Honolulu	**Douglas B. Bell, II**
	Paul DeMare
	Martha Lou Hefley
	Myron Shirasu
Speaker of the House	**Herbert Uemura**
Vice Speaker of the House	**Miilton Howell**
Resident Physician Delegate to House	**Peter McNally**
Alternate	**Ronald Wong**
Student Delegate to the House	**John Matsuura**
Alternate	**Dean Inouye**

The members of the HMA Nominating Committee for 1985 were elected as follows:

Honolulu	**Philip Hellreich**
Leonard Howard	**Calvin Kam**
Philip McNamee	**Neal Winn**
Hawaii-Hilo	**Arch Wigle**
Kauai	**Peter Kim**
Kona	**Kenneth Grant**
Maui	**Helen Percy**

The House of Delegates officially recognized and expressed appreciation, with a standing ovation, for outstanding services as President of HMA for 1983-84, Dr. **Sakae Uehara** and as Executive Director, Mr. **Jonathan Won,** for their dedication to the members of the HMA. Many thanks were bestowed on the Kauai members for their hospitality and coordinating efforts in assuring a successfully run meeting, and to all of the Auxiliary members for their many varied and well-planned activities. Mrs. **JoAnn Lundborg,** president of the HMA Auxiliary, was introduced and thanked the members of the House and the HMA for all the support shown the Auxiliary this past year; she also highlighted some of the issues the Auxiliary has been involved in during 1984. **Bud Wright,** field representative from AMA and liaison to the medical associations, also was introduced.

An early welcome was extended by Kona members to the 1985 meeting, which is to be held at the Kona Surf Hotel the weekend of October 11-14, 1985.

The House of Delegates recessed at 4:30 p.m., and was reconvened for the annual banquet—"MASH" party and installation of officers.

AMA President **Joseph F. Boyle,** gave the closing address at the banquet and installed the newly elected officers. The meeting was adjourned at 9:30 p.m.

1984 Annual Meeting Awards

Medical Reporting Awards:

Commercial newspapers and magazines: **Victor Lipman** (Honolulu magazine)

Television: **Matt Levi** ("Prescription for Trouble"—KGMB-TV)

Institutional newspapers and magazines: **Janet L. Smith** ("Planning for Health"—Kaiser)

School newspapers and magazines: **Leanne Yanabu** ("Marijuana"—editor for The Viking, Hilo High School)

A.H. Robins Co. 1984 Physician of the Year Award for Community Service: **Ann B. Catts,** M.D.

Sportmen's Award:

Golf: President's Trophy (low net) and the Robert Miyamoto Perpetual Trophy (low net): **Ijaz U. Rahman,** M.D.

John Felix Perpetual Trophy (low gross): **Robert H. Oishi,** M.D.

George Mills Perpetual Trophy for Pharmaceutical Representatives (low net): **David Dubois**

Tennis: Open: **Dennis Maehara,** M.D.

Doubles: **Harry Arakaki; David Arakaki**

Table Tennis: **John Spangler,** M.D.

10-K Run: Men's: **James S. Barahal,** M.D.

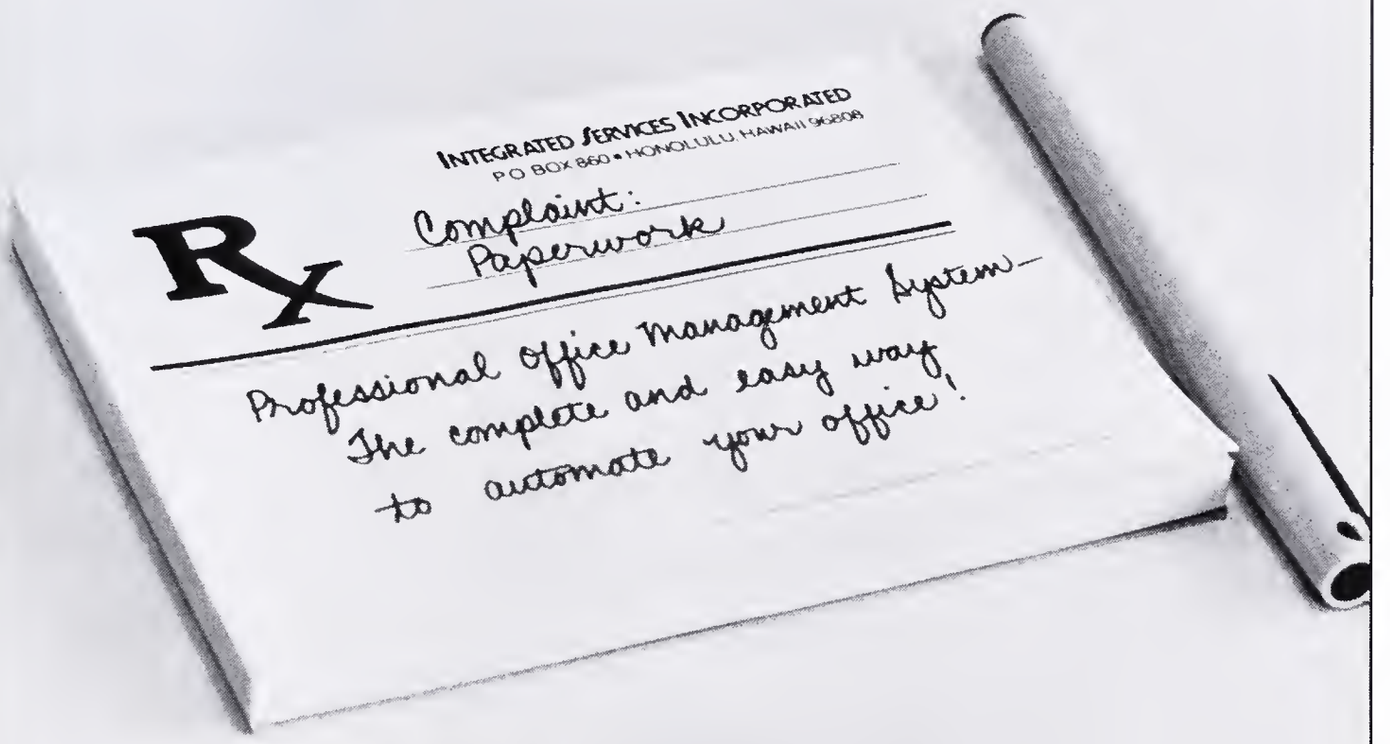
Women's: **Susan Irvine**

Racquetball: **Greg Chun**



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Clinical Applications of the Argon Laser

Norman Goldstein, M.D., F.A.C.P.,* and Jasmin T. Flores, P.A.-C., M.P.H.**

• *From Einstein's conceptualization of the laser in 1917 in* Zur Quantum Theorie Der Strahlung *to the first clinical application of the instrument in the 1960s, lasers in medicine and surgery have emerged as significant tools in treating cases and effecting dramatic outcomes occasionally unrivaled.*

The first medical use of the laser was implemented in ophthalmology in a patient with detached retina. By sending brief flashes of the ruby laser light beam through the pupil, tears in the retina were "welded" to adjacent tissue by creating tiny dots of scar tissue. Almost simultaneously, the ruby laser also was discovered to possess the property of vaporizing chronic hemorrhage in the eye, and the attempt was made to arrest hemorrhage from bleeding vessels.[1]

Since this pioneering work, the use of specific lasers has come to be identified with the specialty and cases for which each is most ideally suited. In dermatology, the argon laser has proven to be the instrument of choice for treatment of vascular cutaneous lesions, such as nevus flammeus, nevus araneus, telangiectasia, acne rosacea, capillary/cavernous hemangiomas, strawberry nevus of infancy, cherry angiomas, and angiokeratoma of Fordyce. Experience also has proven that the argon laser is effective in the removal of tattoos, adenoma sebaceum, granuloma faciale, pyogenic granuloma, and trichoepithelioma—disorders which ordinarily are not classified as vascular cutaneous lesions.

Biological Effects of Laser

Argon laser light is an intense, bright blue-green light in the visible spectrum between 4,800 and 5,200 angstroms (480 and 520 nanometers). It interacts with biological tissue by vaporizing cells in the rapid heat transfer from the laser beam to the cell.[2] A color-specific laser, the argon light is — theoretically — selectively absorbed by the red pigment in hemoglobin and converted to heat; heat damage ensues, vessels thrombose, and vascular lesions lighten in color or virtually disappear.[3,4] Histological studies have demonstrated that there is relative sparing of the epidermal appendages,[5] such as hair follicles and pilosebaceous glands, which reconstitute in the healing of laser wounds.[6] Laser light is non-ionizing, a characteristic that recently has been demonstrated in fibroblast cells grown in tissue culture and exposed to argon laser energy. Grown 9 generations, these laser-exposed fibroblasts showed no statistically significant malignant transformation of the cells.[7]

Clinical Applications

Having begun as an experimental modality of treatment for vascular cutaneous lesions, the argon laser is now a universally utilized instrument in the treatment of nevus flammeus, a large group of congenital vascular malformation of which port-wine stains are representative.[9] Although argon laser photocoagulation is unsurpassed in its effectiveness for treatment of port-wine stains, use of this instrument has been expanded to include other cutaneous lesions. Clinical applications of the argon laser thus can be divided into 5 separate categories: vascular lesions, inflammatory lesions, tattoos, miscellaneous, and adjunctive uses (Table 1).

As a singluar modality of treatment for a given lesion, or as an adjunctive tool, the argon laser continues to endorse its effectiveness in the treatment of various cutaneous lesions previously managed towards a less satisfactory outcome.

Patient-Practitioner Interaction

Argon laser photocoagulation treatments are performed in an ambulatory setting. Local anesthesia, 1% or 2% xylocaine without epinephrine, is infiltrated into the deep dermal-cutaneous layer. Depending upon the extent of involvement of the lesion, treatments are done in stages 6 to 12 weeks apart.

Prior to implementing the treatment, a thorough pertinent history is taken, with particular focus on incidents of previous hypertrophic scarring or keloid formation following surgery or injury to the patient. This is helpful in preventing the treatment to the patient with this type of

TABLE 1. Clinical applications of the argon laser in the treatment of vascular cutaneous lesions

I.	Vascular	IV.	Miscellaneous
	Port-wine stains (nevus flammeus)		Adenoma sebaceum of tuberous sclerosis
	Spider angioma (nevus araneus)		Trichoepithelioma
	Capillary/cavernous hemangioma		Syringoma
	Strawberry nevus of infancy		Fibrous papule
	Telangiectasia		Warts and condyloma accumunata
	Hereditary hemorrhagic telangiectasia (Weber-Osler-Rendu)		Nevi (blue, verrucous, intradermal, epithelial, papillomatous)
	Senile angioma (Campbell de Morgan lesions)		Rhinophyma[16]
	Angiokeratoma of Fordyce		Glomus tumors
	Acne rosacea		Bowen's disease
	Venous lake angioma		Accessory auricle
	Kaposi sarcoma ("AIDS"—skin lesions)		Accessory finger
			"Senile" keratoses
II.	Inflammatory		Seborrheic keratoses
	Pyogenic granuloma		Cutaneous horns
	Granuloma faciale		Keratoachanthoma
			Leucoplakia
III.	Tattoos		Xanthelasma
	Decorative (professional and amateur)		Superficial basal cell carcinomas
	Traumatic (foreign body, e.g. gravel, lead, etc.)	V.	Adjunctive Uses
			Nevus of Ota
			Post-surgical tattooing
			Post-surgical skin grafting

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problem. Further, the patient is informed, at great length, of the dynamics of argon laser treatment, post-operative care, and the healing period, and is shown pre- and post-laser therapy photographs of the worst to expect and the best to hope for in treatment outcome. Emphasis is placed upon the shortcomings of the treatment modality, such as the probability and possibility of scarring, hypopigmentation, texture change, and failure to effect any difference in the characteristics of the lesion.



Fig. 1a. A port-wine stain of left hemifacial involvement in a white Catholic priest, in his 40s.



Fig. 1b. Six months following completion of argon laser treatment, done in two stages, 12 weeks apart. The result is excellent.

Although experience continues to support the efficacy of the argon laser and its uniqueness as a tool in treating a number of cutaneous lesions, it would be a disservice were the patient not prepared for the instrument's limitations. Despite the emphasis placed upon the shortcomings of the argon laser, the majority of patients still strongly pursue the treatment, with a high level of acceptance of treatment outcome.

Repeatedly clarified to patients is that the argon laser cannot totally remove port-wine stains, and can, at best, markedly lighten them so that normal rather than heavy theatrical make-up now can be worn to cover it (Figs. 1a & 1b). Even if a patient has undergone a different modality of treatment for the port-wine stain, such as surgical tattooing (Fig. 2a), the argon laser cannot totally remove the residual lesion, but can effect more complete removal, making the lesion less conspicuous (Fig. 2b). Thus, the argon laser serves not only as a primary modality of treatment for port-wine stains, but also as an adjunctive tool to enhance the outcome of previous surgical work.

However, apart from port-wine stains, smaller vascular lesions, such as telangiectasia (Figs. 3a & 3b), Campbell de Morgan spots ("senile" angiomas), and other angiomas (Figs. 4a & 4b), re-

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Fig. 2o. The white pigment olang the inferior border of the right facial port-wine stoin in this 28-year-old mole nurse is the result of dermal tottooing done when the potient wos 17 yeors old, during which time the entire birthmork was tattaaed.



Fig. 2b. Three months following completian of organ loser therapy, the mojority of the birthmark hos resolved excellently, in oddition to minimizing ottention called to the hyperpigmentotion af dermal tottooing.



Fig. 3o. Diffuse biloterol fociol telongiectosio in o 40-yeor-old white femole.



Fig. 3b. Six weeks follawing completion of argon loser photocoogulotian, oll lesions reveol on excellent resalutian.



Fig. 4o. A purple ongiama of the right lower lip, pre-operatively in o 50-yeor-old white mon.



Fig. 4b. An excellent resolution of the lesions seen six weeks following orgon loser photocaagulatian.

spond by virtual disappearance of the vessels, leaving no visible sequelae. Patients with such lesions are informed of the possible shortcomings of the treatment. Of all the lesions treatable with the argon laser, such relatively simple, solitary lesions appear to respond with a consistently good or excellent outcome.

Patients with tattoos are informed that treatment often results in the removal of all or the majority of pigment, and replaced by a soft, shiny scar or epidermal atrophy (Figs. 5a & 5b). Occasionally, treatment has resulted in the development of hypertrophic or keloid scarring, even if the patient has never displayed a tendency for such post-trauma lesions. Fortunately, experience has shown that in subsequent months or even years the scar relaxes and progressively fades, blending well into adjacent normal skin.

In instances of residual tattoo pigment or hemangioma, patients are informed that re-treatment may be performed to effect more complete removal of the lesions. However, prior to re-treatment, an assessment of indication must be made, particularly taking into consideration the risk-benefit ratio of scarring and the possibility of effecting more complete removal of the residual lesion.

To encourage the patients' acceptance of the reality of the sequelae of argon laser treatment, they are informed that because different skin types respond differently to the argon laser, the period of lesion lightening may be dramatic in 6 weeks, or gradual as in a period of more than 18 months. And they are assured that such responses are within normal limits, emphasizing the importance of optimal post-operative care.

Indications for Laser Therapy

Vascular cutaneous lesions, congenital or acquired, present a cosmetic problem of ongoing, considerable concern to the patient. Fortunately, most of these lesions do not pose life-threatening complications. However, intervention is indicated in instances of episodic bleeding, ulceration, infection, and in those lesions causing functional deformity, such as gigantism or hypertrophy of the involved area, and visual disruption caused by a periorbital lesion. Because of the high probability — 70% by age 7 years — that the strawberry nevus of infancy will involute spontaneously,[10,11] intervention is generally contraindicated. Naturally, exceptions are made individually, particularly if the lesion does obstruct a body orifice.

Patients with port-wine stains often seek argon laser treatment for a variety of reasons, the principal ones being: (1) the desire to be relieved of the tediousness of having to apply abnormally thick make-up to diminish disconcerting stares; and (2) to prevent the growth, hypertrophy, and deformity of the lesion as they age. Because port-wine stains do darken in color from pink to red to purple, and may elevate from a smooth to an irregular surface, and develop the "cobblestone" pattern[12] and blebs seen in the patient with a thick, purple port-wine stain, argon laser therapy is implemented for reconstructive purposes. The argon laser is effective in flattening the cobblestone appearance and obliterating the blebs, in addition to dramatically lightening the lesion, without traditional surgical measures (Fig. 6a, 6b). Further, the progressive ectatic evolution of the lesion is arrested, and a tremendous psychological benefit is reported by a number of patients.[13]

The psychological benefits of the argon laser recently were emphasized to the authors in a case of acquired immune

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deficiency syndrome (AIDS). A 34-year-old male homosexual with typical Kaposi sarcoma skin lesions of AIDS was treated with a Cooper Argon Laser. With the resolution of the cutaneous lesions, the patient felt significant psychological improvement while he was undergoing chemotherapy for the other manifestations of his AIDS.[18]

This, the first case of AIDS treated with the laser,[19] has encouraged other medical centers to use the argon laser in the treatment of AIDS skin lesions.



Fig. 5a. A prafessianally applied tattaa, invalving the deltaid af a 25-year-ald Chinese female with multiple pigments.



Fig. 5b. Ten and a half weeks fallawing completian af argan laser vaparizatian, the result is a saft, shiny scar, with minimal residual pigment. This can be vaparized in a later fallaw-up treatment. The epidermal atraphy usually impraves spantaneausly aver a 4- ta 6-manth periad.



Fig. 6a. A thickened, purple, irregularly textured part-wine stain (the "cabblestane" pattern), with raised, firm blebs, invalving the majarity af the lawer half af the face; the right auter and inner ear; and extending salidly inta the neck and anteriar chest af a white male in his 40s.



Fig. 6b. The superiar partian af the birthmark having been phatacaagulated and vaparized with the argan laser, the autcame is dramatic. The right ear has taken an a mare narmal appearance, with the patient expressing great relief and satisfactian that his ENT physician naw is able ta visualize the inner ear far the first time that he has been fallawing him far chranic right ear infectians far numeraus years. Alsa, 6 weeks past-aperatively, the blebs are gane, the texture af the skin is naw mare unifarm, and the fading is dramatic, as campared ta the untreated, lawer half af the part-wine stain — all withaut benefit af traditianal surgery. In this phatagraph, the patient still has at least 50% af the birthmark left ta be treated.

Summary

As all tools in medicine and surgery, the usefulness of the argon laser is best determined by the operator. Further, it is the combined understanding of biophysics principles, hand-eye coordination of the laser operator,[14] and the quality of the patient-practitioner interaction[15] that transforms the technology into an art form. Certainly, there is room for advancement in laser technology, but ultimately it will be the ability of the operator to employ a specific technique, be it singular or various, that shall diminish the shortcomings of the instru-

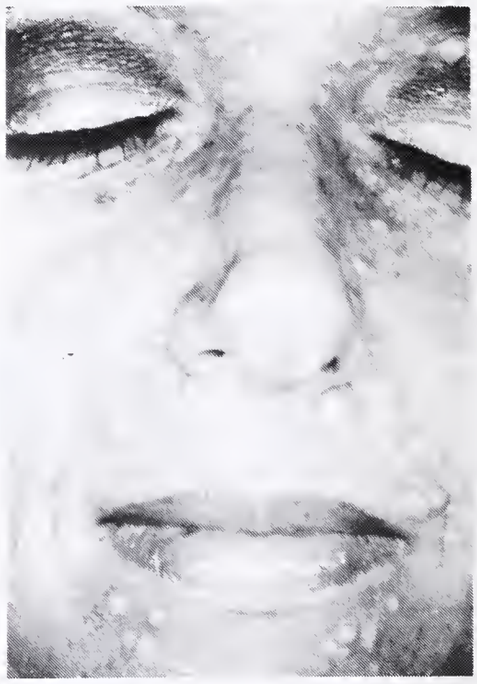


Fig. 7a. Multiple lesians af trichaepitheliama invalving the face af a 29-year-ald white female, ballraam dance instructar, pre-aperatively.

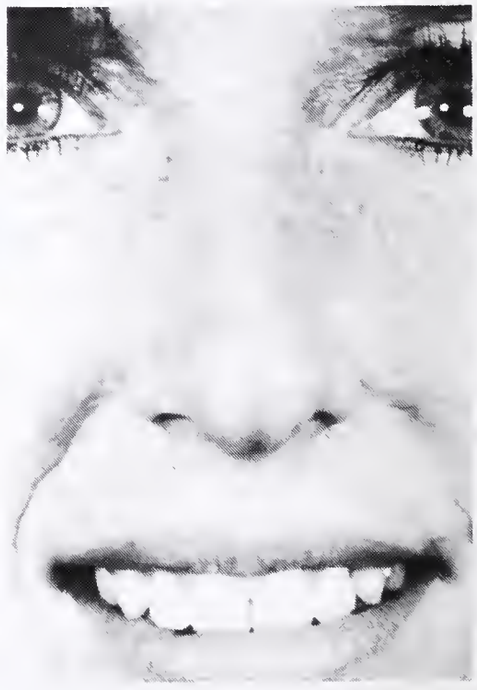


Fig. 7b. Withaut the benefit af canventianal surgery, the raised lesians have resalved excellently, leaving a smaath texture af the skin 3 manths fallawing argan laser therapy.

ment's treatment capability. Simply, the quality of treatment outcome will be highly dependent upon the style of translation of the technical science into the art that underlies patient management with the argon laser.

An example of the potential use of this very exciting therapy is illustrated by the first patient with AIDS skin lesions treated with the argon laser.[19]

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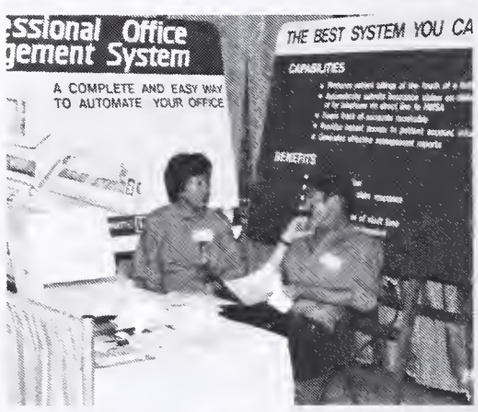
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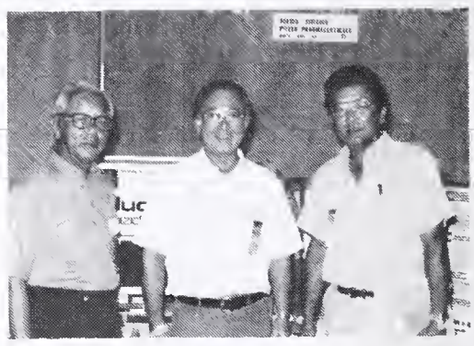
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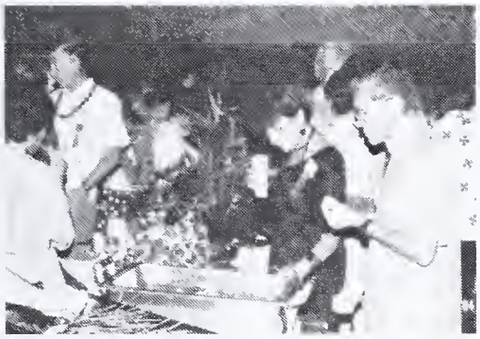
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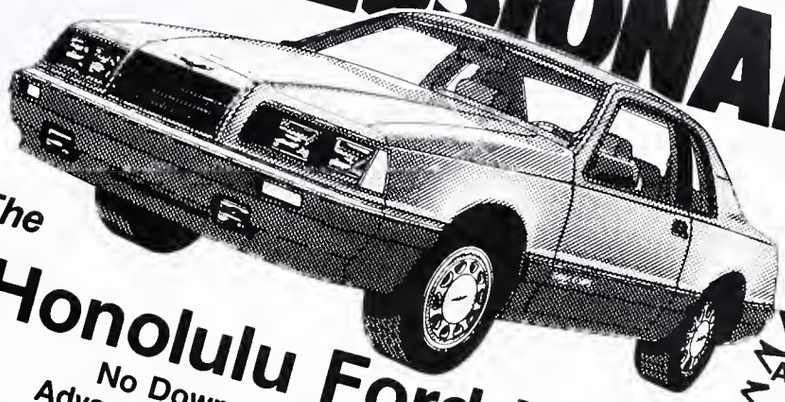
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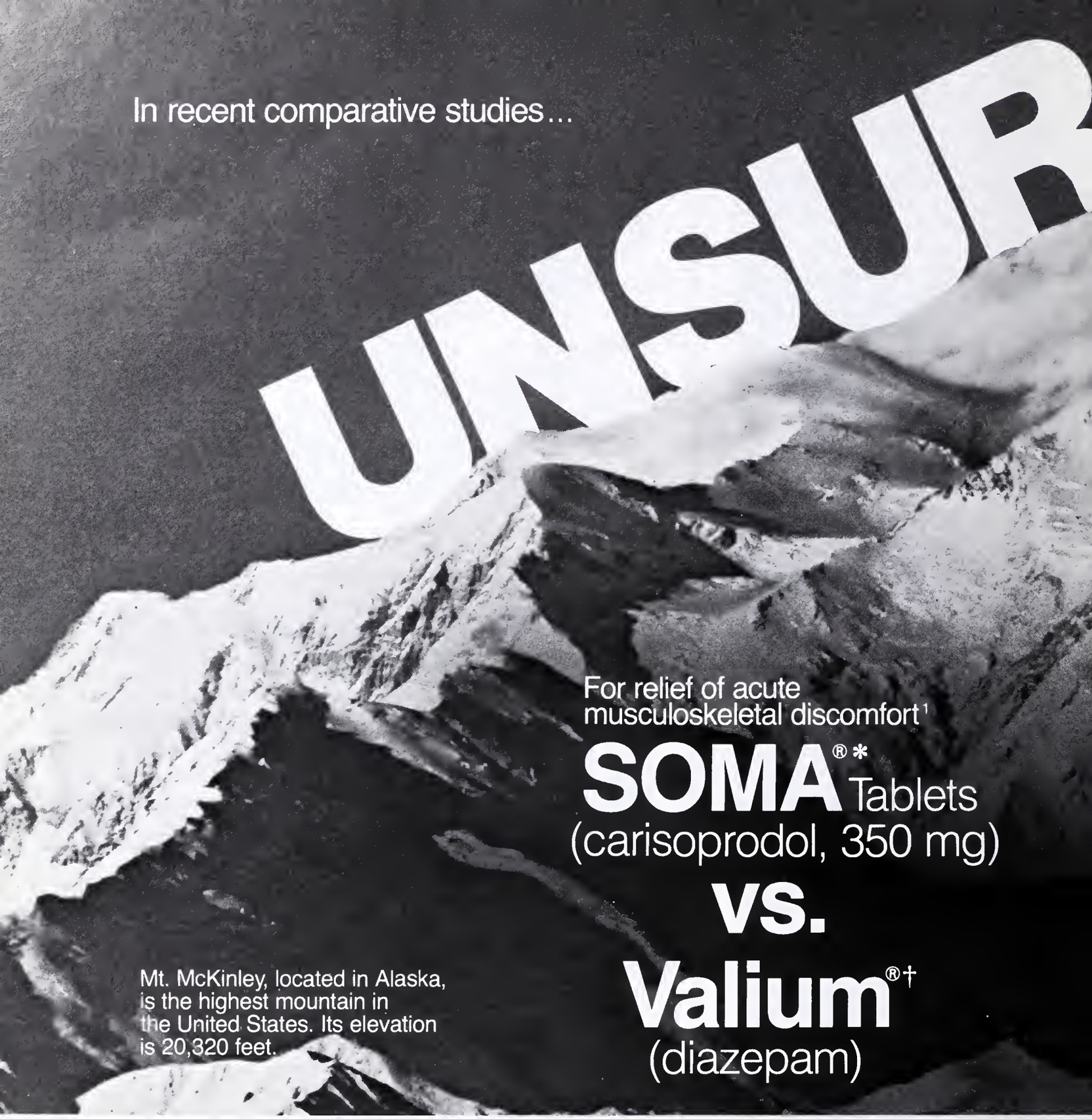
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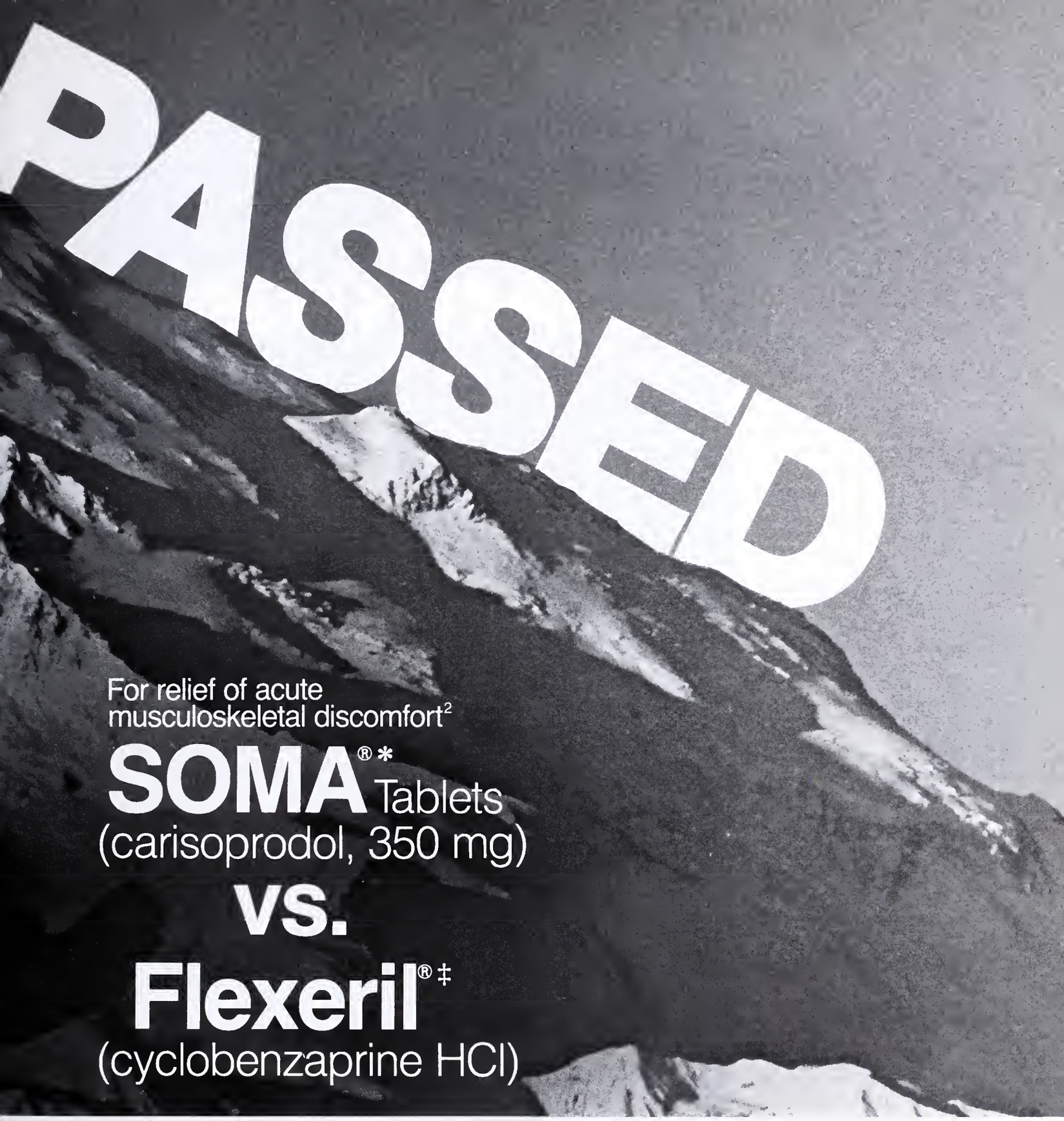
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Treatment of *Clonorchis Sinensis* in Hawaii's Laotian Population—

Experience with Praziquantel

Michael J. O'Leary, M.D., M.P.H., John T. Berthiaume, M.D., and Vannara Sakbun, Honolulu

• *Hawaii has seen the influx of about 12,000 refugees from Southeast Asia since 1975, including about 5,000 Laotians, and many practitioners here have dealt with medical problems not commonly seen in our non-immigrant population. Intestinal parasites are a common problem in this refugee group, with prevalences on arrival reported to range from 33% to 83%.*[1-12] *While relatively effective and safe treatment has been available for the nematodes, cestodes, and protozoa, treatment has been difficult for the trematodes, or flukes. One of these,* Clonorchis sinensis, *is known to be relatively common in the Laotian immigrant population.*[4,5,7,11]

We undertook a study to determine the magnitude of the *Clonorchis sinensis* problem in Laotians in Hawaii and the effectiveness of praziquantel, a newly released medication.

Methods

Stools were collected during summer 1983 from 122 Laotian refugees who had spent a mean of 33 months (range from 1 to 58 months) in the United States. Information was obtained by interview and medical record review regarding past screening and treatment for intestinal parasites. A single stool specimen was obtained from each participant, and a portion smeared and preserved in Schaudinn's solution before subsequent trichrome staining. The remainder was refrigerated until formol-ether or formol-ethyl acetate concentration and microscopic analysis could be accomplished. All trichrome slides and concentrated samples were interpreted by the same experienced parasitologist. In addition, blood was collected for anemia screening and for total eosinophil count.

Any individual with parasites was offered treatment; for *Clonorchis sinensis,* this consisted of praziquantel (Biltricide, Miles) 25 mg per kg t.i.d. for 1 day. *C. sinensis* is closely related to another liver fluke, *Opisthorchis viverrini.* No effort was made to distinguish these 2 parasites.

Results

Of the 122 Laotians enrolled in this study, 42 (34.4%) were harboring *Clonorchis sinensis.* Neither anemia, eosinophilia, stool character, nor chronic symptoms were predictors of the presence of this parasite. *C. sinensis* accounted for nearly two-thirds of all parasites found (Table 1). In the same individuals for whom old records were reviewed regarding screening on arrival to the United States, *C. sinensis* constituted less than one-third of parasitic infections.

This predominance of *C. sinensis* at 33 months of residence in the United States was due in part to the fact that curative treatment for this fluke was not available until mid-1983, and also because *C. sinensis* has been demonstrated to be a much more persistent parasite than most others in the absence of treatment.[13,14] In this group, 27 individuals with *C. sinensis* have been treated to date with praziquantel, and follow-up stools have been successfully collected in 9. Of these, 8 (88.9%) were free of *C. sinensis* on retesting, consistent with other published eradication rates.[15-18]

Discussion

The prevalence of *Clonorchis sinensis* reported here (34.4%) is higher than that noted in several other studies, which range from less than 1% to 31%.[5,7,8,9,11,12] It is especially notable in that this represents a rate at nearly 3 years of residence in the United States, while other reports refer to newly arrived immigrants.

Our rate approaches that of Temcharoen et al.[19] who reported a 44% prevalence of *Opisthorchis viverrini* in Laotians on arrival at a Thai refugee camp. *C. sinensis* is not capable of transmission in Hawaii or in most geographic areas because of the need for 2 intermediate hosts: a particular species of snail and fish, which when eaten raw or insufficiently cooked can transmit the infection to man.[2,13]

Of *C. sinensis* infections, 70% are

TABLE 1. Parasites found

1. Clonorchis sinensis	42/122	= 34.4%
2. Hookworm	6/122	= 4.9%
3. Giardia lamblia	6/122	= 4.9%
4. Trichuris trichiura	6/122	= 4.9%
5. Strongyloides stercoralis	3/122	= 2.4%
6. Taenia species	2/122	= 1.6%
7. Entameba histolytica	1/122	= 0.8%
8. Hymenolepis nana	1/122	= 0.8%
9. Metagonimus yokogawai	1/122	= 0.8%
10. Heterophyes heterophyes	1/122	= 0.8%
11. Ascaris lumbricoides	0/122	= 0%

Presented in part at the American College of Physicians Regional Meeting, Honolulu, Hawaii, February 1984.

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asymptomatic. This parasite is known to be capable of living in humans for up to 30 years and may produce substantial liver and biliary tract pathology[13,14] even in asymptomatic individuals. If symptoms occur, they are related to parasitic infiltration of the biliary tract and include right upper quadrant pain and discomfort, hepatic tenderness, or biliary obstruction, and potentially include cholangitis, pancreatitis, cirrhosis, and portal hypertension.[13,14] There is also a reported increase in the incidence of liver and biliary tract cancer in patients with *C. sinensis* infections.[13]

Effective treatment for clonorchiasis was not available until mid-1983, when praziquantel was introduced on the market. This medication represents a significant advance in therapy for a group of parasites, the flukes, previously relatively resistant to treatment. These include the liver flukes, which form the focus of this paper. Other species of trematodes which respond to praziquantel include *Paragonimus westermani* (lung fluke), *Metagonimus yokogawai* (intestinal fluke), *Heterophyes heterophyes, Fasciola hepatica,* and, very important because of their worldwide prevalence, *Schistosoma mansoni, S. haematobium, S. japonicum,* and *S. mekongi* — all of which are blood flukes causing schistosomiasis.[17]

In addition, praziquantel is probably as effective as niclosamide in the treatment of *Hymenolepis nana* (dwarf tapeworm), and has demonstrated some dramatic responses when used in the treatment of neurocysticercosis (*Cysticercus cellulosae,* a cystic form of *Taenia solium,* pork tapeworm), a potentially serious and difficult to treat infection.[17]

Praziquantel is well absorbed orally and its safety has been suggested in several studies.[15,17,18] It acts by increasing the permeability of the parasite tegument to calcium, causing tetanic contraction as well as disruption of the tegument.[16,17] There are no known teratogenic effects. Reported side effects include only transient abdominal pain, or occasional fever, dizziness, headache, nausea, diarrhea, or sedation.[15,17,18] The treatment has the additional advantage of requiring only a single day of medication divided into 3 doses. The major drawback is the cost of this medication. A full treatment program for most adults averages about $40 to $60.

Our study confirms the safety of praziquantel with no reported side effects in our group of treated patients, and a success rate in Hawaii's Laotian population of 88.9%, comparing favorably with that reported in other studies. Based upon the findings of this study, we would recommend that persons with known *Clonorchis sinensis* infections, untreated in the past and even if asymptomatic, now should be treated with praziquantel.

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Human *Brucella Canis* Infection in Hawaii

Mark K. Lum, M.D., Francis D. Pien, M.D., M.P.H.,
and David M. Sasaki, D.V.M., Honolulu

• *Brucellosis is an uncommon disease in Hawaii, the most recent previously reported case occurring in 1972. Infection with* Brucella canis *is rarely documented in humans and has not previously been reported in Hawaii. In this article, we describe a case of human* Brucella canis *infection which was only retrospectively recognized.*

Case Report

A 65-year-old woman initially was admitted to a Neighbor Island hospital after several weeks of malaise, weakness, weight loss, and spiking fevers of up to 102°. Her past medical history was significant for atherosclerotic cardiovascular disease, essential hypertension, Type II diabetes mellitus, hypothyroidism, and a history of a reactive tuberculin skin test. Three months earlier, she had undergone an uncomplicated cholecystectomy. At the time of initial evaluation, the patient was found to have splenomegaly, neutropenia, and thrombocytopenia. Computerized tomography of the abdomen demonstrated a gastric wall abnormality, but mucosal biopsies obtained by esophagoscopy were normal. A bone marrow examination showed only decreased Prussian blue staining for iron.

A presumptive diagnosis of lymphoma was made. Because of a deteriorating clinical status, chemotherapy was initiated with vincristine, cytoxan, and corticosteroids. Isoniazid and rifampin were started for tuberculosis prophylaxis. In addition, a short course of cephradine was given for *Klebsiella* urinary tract infection. Improvement in her clinical status was reported initially; however, over the next 2 weeks she developed marked mental changes, with paranoid delusions and withdrawn behavior. Subsequently, she had all medications discontinued and was transferred to Straub Hospital for further evaluation.

At the time of hospital transfer, the patient was afebrile, and oriented to person and place but not to date. She appeared cachetic but was in no acute distress. Her splenic edge was palpable 11 cm below the costal margin; the patient's liver span was 22 cm. No other masses or ascites were found and no adenopathy appreciated. Neurologic exam was normal except for the mental status changes previously described.

Laboratory data demonstrated a peripheral white count of 2,900/cmm with a normal differential. Hemoglobin was 10.6 gms % and platelet count was 78,000/cmm. Prothrombin and partial thromboplastin times were mildly elevated. Serum glutamyl transferase was 250 u, alkaline phosphatase 150 u, and bilirubin 3.0 mg %. Antibody to hepatitis B surface antigen was positive.

Because of concern for possible lymphoma, a laparotomy was performed on the third hospital day. Celiac node biopsy was normal. Liver biopsy was interpreted as consistent with mild chronic active hepatitis. Splenectomy was done but demonstrated only non-specific enlargement by pathologic examination. On the 9th hospital day, blood cultures drawn 6 days earlier grew Gram-negative rods in 2 of 4 bottles. No further identification was made until after completion of her hospitalization. The organism was later identified by the Center for Disease Control, Atlanta, Ga., to be *Brucella canis.* The patient's serum had a titer of ≥1:2560 to *B. canis* by slide agglutination.

The remainder of the patient's hospital course was remarkable for a severe coagulopathy and multiple nosocomial infections, which included *Klebsiella* urinary tract infection and bacteremia with *Enterococci* and *Enterobacter* sp. secondary to an infected sacral decubitus ulcer. Consequently she received various antibiotic regimens which included ampicillin, cephalosporin, aminoglycoside, and, lastly, a 10-day course of intravenous trimethoprim-sulfamethoxazole. Eventually the patient recovered and returned home to Kauai. Later, it was learned that the patient's family kept several dogs, though there was no history of illness in any of the animals. Serologic testing and blood cultures of the family's dogs as well as other family members were negative for any evidence of *B. canis.*

Discussion

Brucella canis is an infrequently recognized cause of human illness. Originally described as a pathogen in dogs by Carmichael in 1966,[1] about 30 cases of human infection have been reported since that time.[2,3] The organism is harbored primarily in dogs, but foxes and coyotes may be carriers.[1] The prevalence of *B. canis* infections in dogs ranges from 1% in pets to more than 10% in stray dogs;[4,5] an incidence of 86% in one kennel epidemic has been reported.[6] Often, infected dogs remain asymptomatic even in the face of persistent bacteremia. When symptoms develop, reproductive disorders are common, including spontaneous abortion in females, and epididymitis, prostatitis, orchitis, testicular atrophy, and scrotal dermatitis in males.[7] Treatment in dogs is often unsuccessful.

Human infections are acquired from contact with infected dogs or in laboratory workers handling the organism. Manifestations of disease are non-specific and clinical onset may be acute or insidious. Fever is almost always present; splenomegaly and adenopathy are common. Malaise, body aches, headache, and weight loss are other frequently presenting complaints.[8,9] One case of arthritis in a child has been reported.[10] Meningitis, endocarditis, osteomyelitis, hepatitis, and peritonitis, though occasionally seen with other *Brucella* infections, have not been described with *B. canis.*[3]

Epidemiologic studies have demonstrated positive *B. canis* serologic titers (titer ≥1:100) in about 0.4% of human populations studied.[2,11] Lower titers are even more common and are related to degree of exposure to dogs.[12] These data suggest that subclinical infections are frequent. Diagnosis in humans is established primarily by demonstration of bacteremia with *B. canis.* This organism grows slowly and therefore cul-

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tures should not be discarded for at least 2 weeks to ensure optimum results.

Serologic studies using *B. canis* antigen agglutination testing usually will show a titer rise during the acute illness, returning to normal several months following curative therapy.[2] One case of documented bacteremia with persistently negative serologies has been reported.[3] *B. canis* antigen will not cross-react with other *Brucella* species. Consequently, the commonly used febrile agglutination tests that employ *B. abortis* antigen will be negative in *B. canis* infections.[13]

Treatment of human infections has been curative in all previously described cases. However, the optimum antibiotic and duration of therapy are not established. In vitro studies suggest that tetracyline, ampicllin, erythromycin, rifampin, chloramphenicol, and cephalosporins may be effective.[14] Cures have been documented with tetracycline and ampicillin alone, or in combination with streptomycin.[3,13,14] Moxalactam was effective in one case.[10]

Our patient received 2 weeks of rifampin and isoniazid plus a short course of cephradrine prior to documented bacteremia. Because of the multiple antibiotics used throughout our patient's illness, it is difficult to conclude which were responsible for eradication of the infection.

This is the first case of human *B. canis* disease reported in Hawaii. Presumably, the infection was acquired by contact with an infected household dog, although this could not be documented. The presenting symptoms of fever and malaise were non-specific, and, because of the delay in culture growth and identification of the organism, optimum antibiotic therapy was not given. *B. canis* must be considered in the differential diagnosis of febrile patients in Hawaii, especially in the presence of weight loss and splenomegaly.

Summary

Brucella canis only rarely has been documented to cause disease in humans, and has not previously been reported in Hawaii. We report the first recognized Hawaiian case of *B. canis* infection, a 65-year-old housewife from Kauai, who presented with weight loss, fever, and splenomegaly.

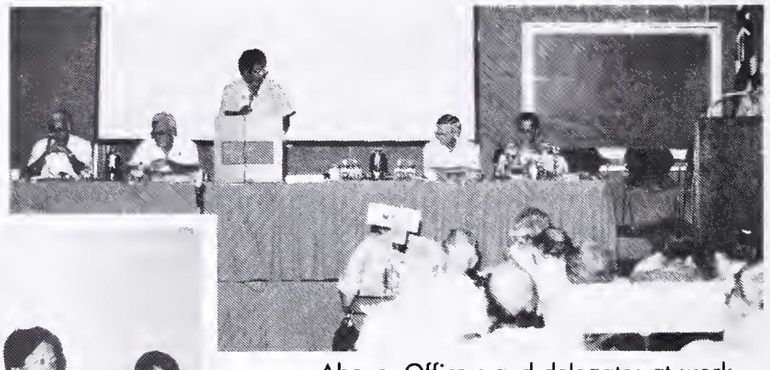
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More HMA Annual Meeting Photos *Continued from page 59*



Left: AMA President Joseph Boyle addressing HMA House of Delegates



Above: Officers and delegates at work



Right: Reference Committee on Finance consisting of Drs. Jeannette Chang, Ben Hur, Thomas Au, and Andrew Don



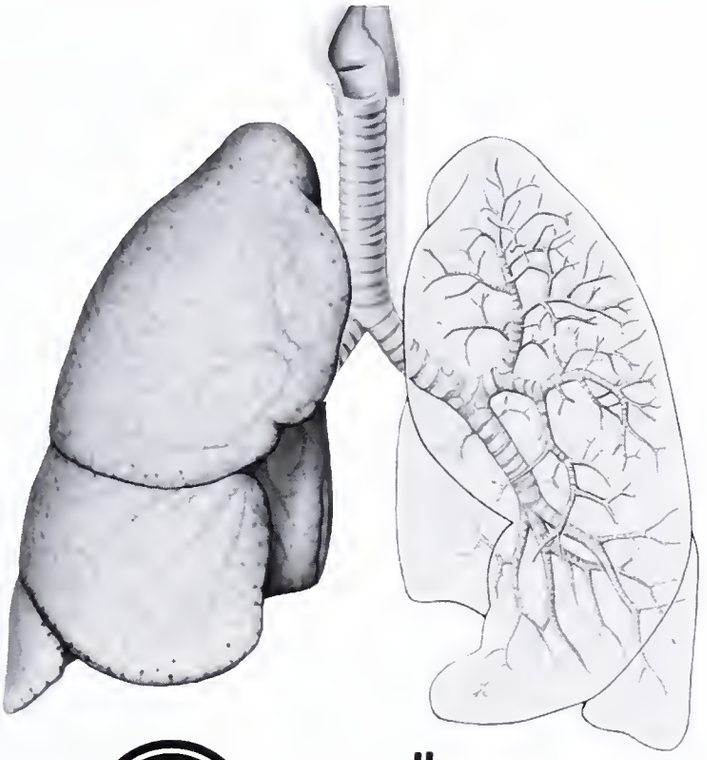
Above: Fumiko Uehara, Susan Hindle, Dr. Joseph Boyle, Dr. Russell Stodd, Leanna Stodd, and Dr. William Hindle



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Continued on page 76

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Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor® (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS ONGOING

For a complete list of ongoing programs, please refer to the September 1984 issue of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Feb. 9-16, 1985	Fifth Annual Sports Medicine Now, American College of Sports Medicine. Contact: Stuart Zeman, M.D., Course Chairman, 2999 Regent Street, Suite 203, Berkeley, Calif. 94705, (415) 540-8686. Location: Maui Surf.
Feb. 11-14, 1985	*Update in Laser Medicine and Surgery, Pacific Laser, 119 Merchant Street, Suite 601, Honolulu, Hawaii 96813, (808) 523-6842. Location: Hawaiian Regent Hotel.
Feb. 12-15, 1985	Hawaiian Cardiology Update, Straub Clinic and Institute for Medical Studies, 14761 Franklin Avenue, Suite A, Tustin, Calif. 92680, (714) 832-2650. Contact: Kim Stroich. Location: Honolulu.
Feb. 12-16, 1985	Course in Complex Coronary Angioplasty by Dr. Geoffrey Hartzler, Mid America Heart Institute of St. Luke's Hospital of Kansas City, (816) 932-2220. Location: Maui Surf.
Feb. 16-23, 1985	Nephrology, University of Southern California School of Medicine, Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033. Location: Kapalua, Maui.
Feb. 16-23, 1985	*Ethics in Medicine, with Dr. Charles Bodemer, University of Hawaii School of Medicine, 1960 East-West Road, Honolulu, Hawaii 96822, c/o Dee Chang, (808) 948-6949. Location: 7-day cruise around the Hawaiian Islands.
Feb. 16-23, 1985	Perinatal Medicine, University of Southern California School of Medicine, Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033. Location: Maui.
March 2-9, 1985	Medicine and Civilization in China, University of Washington School of Medicine, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195. Location: Sheraton Kauai on Poipu Beach.
Feb. 25-March 3, 1985	Update in Digestive Diseases, Professional Seminars, (201) 379-1100. Location: Cruise around the Hawaiian Islands aboard the SS Constitution.
March 9-16, 1985	Imaging Solutions for the '80s, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Waikoloa, Kona.
March 16-23, 1985	*Hawaiian Culture and Healing, Dr. Andrew Allan, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, c/o Dee Chang, (808) 948-6949. Location: 7-day cruise around the Hawaiian Islands.
March 16-23, 1985	Advances in Drug Therapy, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Lahaina Hotel on Maui.
March 18-22, 1985	University of Hawaii Sports Medicine Course, College of Continuing Education and Community Service, Sakamaki Hall, 2530 Dole Street, Honolulu, Hawaii 96822, (808) 948-8244, c/o Joy Lewis. Location: Princess Kaiulani Hotel, Honolulu.
March 22-April 7, 1985	*Chinese Culture and Healing, Dr. Andrew Allan, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, c/o Dee Chang, (808) 948-6949. Location: 16-day tour of China.
March 23-30, 1985	Vascular Surgery, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Lahaina, Maui.
March 25-29, 1985	*OB/GYN Update 1985, co-sponsored with the University of Washington School of Medicine, c/o Dee Chang, Continuing Medical Education, University of Hawaii School of Medicine, 1960 East-West Road, Honolulu, Hawaii 96826, (808) 948-6949. Location: Kauai.
March 30-April 6, 1985	Neurology Update, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Lahaina, Maui.
April 5-22, 1985	*Dialogues in OB/GYN with Dr. Abe Mickal, University of Alaska, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, c/o Dee Chang, (808) 948-6949. Location: 16-day tour of China.
April 6-12, 1985	Australian and American Psychosomatic Obstetrics and Gynecology Combine Meeting, Dr. Lorraine Dennerstein, Department of Psychiatry, Austin Hospital, Heidelberg, Victoria 3084 Australia, or Dr. David Young, 131 Chadwick Street, Portland, Maine 04102. Location: Hotel Inter-Continental Maui.
April 12-28, 1985	*Medicine in China: East and West, Dr. J. Wellington, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, Dee Chang, (808) 948-6949. Location: 16-day tour of China.
April 13-20, 1985	Radiology for the Emergency and Primary Care Physician, American Institute of Postgraduate Education, Del Mar, Calif. Contact: Edity Bookstein/AIPE, P.O. Box 2586, La Jolla, Calif. 92038, (619) 454-3212. Location: Kauai.
April 15-19, 1985	Advancements in Cardiovascular Diagnostic and Therapeutic Methods, International Medical Education Corp., 64 Inverness Drive East, Englewood, Colo. 80112, (303) 790-8445 or (800) 525-8651. Location: Maui.
April 27-May 4, 1985	Management of the Surgical Patient, Stanford University Medical Center, Office of Postgraduate Medical Education, Room TC 129, Stanford, Calif. 94305, (415) 497-5594. Location: The Mauna Kea Beach Hotel.

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Surplus Per Insured	$8,148	$6,736	$5,607	+45.32

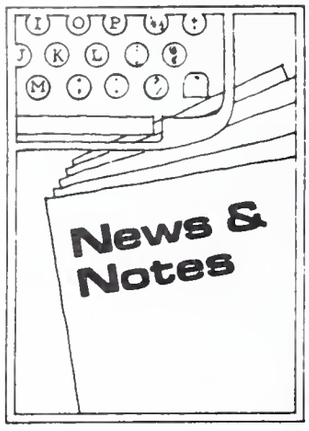
For further information contact the Hawaii Medical Association at 536-7702 or MIEC toll free at 800-227-4527.

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Life in These Parts . . .

Excerpts from Medicaid Newsletter No. 48-03 — "One Hysterectomy in a Lifetime," November 29, 1984: "The permanency of the procedure dictates that only one hysterectomy procedure is done during a person's lifetime." Adds **Fred Reppun**, our editor-in-chief: "Men are lucky; they may have more than one!"

Francis Ikezaki dabbles with inventions. One of his latest is a plastic pillow-shaped container with a large screw-on cap. The plastic pillow is a float for the non-swimmer; a headrest for the floater. The pillow accommodates a portable radio or cassette player so one can listen to favorite tunes while swimming or sleeping. The inventive genius admits that his ideas come to him when he is sleeping or dreaming. We have used a prototype which is marketed as the "Waikiki Beach Pillow" by Fran-et-Stel Research Inc., Honolulu, Hawaii.

Favorite toy of several doctors around town is the new Maserati Biturbo — four of five owners locally are doctors. (Don Chapman, November 9, 1984)

Cyrus Loo has accepted the phoned invitation of actress Lynn Fontaine to be her houseguest in Florida and treat her with acupuncture. She offered the invitation after hearing of Cyrus from friends. (Don Chapman, November 14, 1984)

The first Caucasian-American invited by the Chinese to "come home" is **Olaf Skinsnes**, who leaves for China after 17 years as a professor of pathology at the John A. Burns School of Medicine at the University of Hawaii at Manoa. Olaf was born in China in 1917 and accepted the offer to spend the rest of his life there. (Don Chapman, September 17, 1984)

Gerald Faulkner is one of 7 U.S. eye doctors testing a soft, silicone lens so pliable that it can be folded in half and inserted through an incision even tinier than that used in current implant techniques. The new implant — Elastic Lens — was developed by Starr Surgical Co., which received an investigational device exemption from the FDA.

Dean of the University of Hawaii medical school Terence Rogers and Senator Daniel Inouye have the solution to the medical care of the 130,000 islanders of Micronesia. Presently a handful of expatriate contract doctors and 35 Micronesian medical officers (who are all nearing retirement age) handle the load. Inouye has been pushing through Congress a proposal to spend $5 million on a 10-year program to train another generation of medical officers. The program would be run by Rogers and the UH medical school on Ponape and produce 70 M.O.s over the 10 years. Thus far the UH medical school has produced 7 Micronesian M.D.s, and only 2 have elected to return to the islands to practice. The professional and personal attractions of a U.S. practice have been great. Terry is enthusiastic about the M.O. program: "At 59, it's nice to be able to find something to get passionate about."

William Creek, a Jackson, Tenn., pediatrician and allergist, is author of "The Yeast Connection" and other articles on yeast-connected ailments. He describes patients suffering from a variety of complaints — depression, loss of memory, gastric and intestinal complaints, hives, psoriasis, hyperactivity, learning disabilities, autism, and even multiple sclerosis. He treats them with sugar-free, yeast-free diets plus vitamins, mineral supplements, and oral doses of nystatin, and believes that the yeast produce toxins that weaken the immune system.

Charlotte Dennis, director of St. Francis Home Care, reports that in 1962 when the program was started, there were 844 home visits during the first nine months. During the 1983 and 1984 fiscal years, the home care staff made more than 30,000 visits per year. Charlotte says that home health care is increasing because hospitals try to discharge patients as soon as possible and long-term care facilities are limited.

Jiro Nakano, Hilo poet-cardiologist, now has authored a book, "Samurai Missionary," which describes the life of Rev. Shiro Sokabe, the first Christian missionary to the Japanese immigrants in Hawaii. The book is available at The Book Room, 15 Craigside Place, Honolulu 96817, and is timely because 1985 is the 100th anniversary of the Japanese immigration to Hawaii.

Steven Berman, lecturing at the 128th annual HMA meeting on Kauai, told the audience that rats are the primary carriers of leptospirosis and "Where rats eat, they pee . . . and if the area stays wet, the lepto, which need moisture, will survive." Steven feels the theory that leptospirosis can be avoided simply by staying away from freshwater streams, ponds, and taro patches is overrated.

Warren Sparks, emergency physician with the Kauai Medical Group, reported at the 128th annual HMA meeting that the leading cause of travelers' death and debilitation is car accidents, followed by drowning, carbon monoxide poisoning, electrical injuries, and drug reactions (from medicine travelers carry and from over-the-counter drugs bought in foreign countries). Warren warns that drug reactions are a more common cause of disability and death than infections picked up in foreign countries.

Collection of Excuses From Home . . .

1. Peiz exkuse John for being absent on January 28, 29, 30, 31, 32, and 33.
2. Chris have an acre in his side.
3. May could not come to school yesterday because she was bother by very close veins.
4. John was absent yesterday because he had a stomach.
5. My son is under the doctor's care and should not take P.E. Pliz execute him.
6. Lillie was absent from school yesterday and she had a gang over.
7. Pliz excuse Blanche from P.E. for a few days. Yesterday she fell out of the tree and misplaced her hip.
8. Pliz excuse Joey Friday. He loose vowels.
9. Carlos was absent yesterday because he was playing football. He was hurt in the growling part.
10. Pliz exkuse Sandra from being absent yesterday. She was in bed with gramps.

(Ed.: Our thanks to HMA Secretary Marilyn Lindsey)

Elected, Appointed & Honored

The U.S. Army Surgeon General's office has named a U.S. Army award and lecture after **Robert Moser** of Haiku, Maui, and Beerhees Township, N.J., in recognition of the "general internist in the Army Medical Corps who best exemplifies the principles and practice of general internal medicine, clinical competence, professionalism, and compassion." The award was named after Moser because "he was the first general internist in the Army who embodied all the things by which we now recognize in internal medicine."

Then there is heart surgeon **Richard Mamiya** "who will become the first living lay person to have a building at St. Louis School named for him when the 500-seat Mamiya Theater is completed." (Don Chapman, November 1, 1984)

Al Chun-Hoon has been named president of the Western Conference of Pre-Paid Medical Service Plans, an alliance of 47 health plans in the western U.S. and Canada.

Newly elected Kapiolani Women's and Children's Medical Center medical staff officers are: Chief of staff **Gary Fujimoto**; Chief of staff-elect **Jeanette Chang**; Secretary **Neal Winn**; Past chief of staff **Richard Mitsunaga.**

Continued on page 77

KONA FEE SIMPLE



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Lots range in size from 15,000 to 26,200 square feet. Prices start at $94,000. No other fee simple homesites on the Big Island can offer a comparable value.

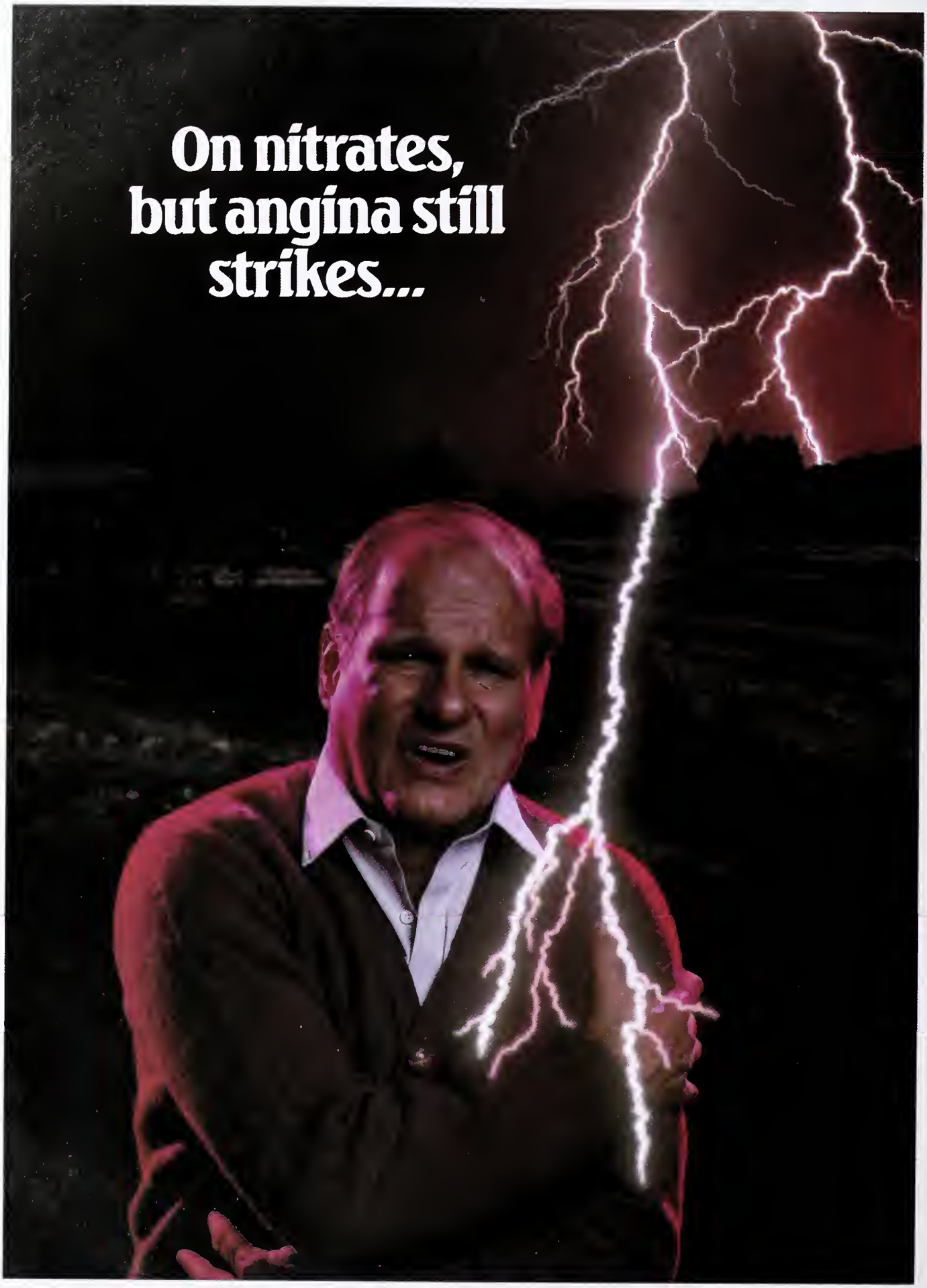
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strikes...

After a nitrate, add ISOPTIN®
(verapamil HCl/Knoll)

To protect your patients, as well as their quality of life, add Isoptin instead of a beta blocker.

First, Isoptin not only reduces myocardial oxygen demand by reducing peripheral resistance, but also increases coronary perfusion by preventing coronary vasospasm and dilating coronary arteries — both normal and stenotic. These are antianginal actions that no beta blocker can provide.

Second, Isoptin spares patients the beta-blocker side effects that may compromise the quality of life.

With Isoptin, fatigue, bradycardia and mental depression are rare. Unlike beta blockers, Isoptin can safely be given to patients with asthma, COPD, diabetes or peripheral vascular disease. Serious adverse reactions with Isoptin are rare at recommended doses; the single most common side effect is constipation (6.3%).

Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

So, the next time a nitrate is not enough, add Isoptin... for more comprehensive antianginal protection without side effects which may cramp an active life style.



ISOPTIN. Added antianginal protection without beta-blocker side effects.

Please see brief summary on following page.

Continued from page 68

ISOPTIN® TABLETS
(verapamil HCl/Knoll)
80 mg and 120 mg

Contraindications: Severe left ventricular dysfunction (see *Warnings*), hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no pacemaker is present), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction <30%) or moderate to severe symptoms of cardiac failure. Control milder heart failure with optimum digitalization and/or diuretics before ISOPTIN is used. ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild, and controlled by decrease in ISOPTIN dose). Occasional elevations of liver enzymes have been reported; patients receiving ISOPTIN should have liver enzymes monitored periodically. Patients with atrial flutter/fibrillation and an accessory AV pathway (e.g., W-P-W or L-G-L syndromes) may develop a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion. AV block may occur (3rd degree, 0.8%). Development of marked 1st-degree block or progression to 2nd- or 3rd-degree block requires reduction in dosage or, rarely, discontinuation and institution of appropriate therapy. Sinus bradycardia, 2nd-degree AV block, sinus arrest, pulmonary edema, and/or severe hypotension were seen in some critically ill patients with hypertrophic cardiomyopathy who were treated with ISOPTIN. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of overdosage. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, patients should be monitored closely. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function or in patients who have also recently received methyldopa. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patient carefully monitored. ISOPTIN may have an additive hypotensive effect in patients receiving blood-pressure-lowering agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C:* There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor, and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR<50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%). The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: confusion, paresthesia, insomnia, somnolence, equilibrium disorders, blurred vision, syncope, muscle cramps, shakiness, claudication, hair loss, maculae, and spotty menstruation. Overall continuation rate of 94.5% in 1,166 patients. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in 80 mg and 120 mg sugar-coated tablets. July 1982 2068

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Dr. Charlotte Florine presenting KGMB-TV reporter Matt Levi with Distinguished Medical Reporting Award



Sportsmen's Night Party



Dr. Richard Ho announcing golf tournament winners at Sportsmen's Night Party

Continued from page 72

Physicians Speak Up

Orthopod **Larry Gordon** corrected the information re current use of chymopapain for treating ruptured discs as reported by a Star Bulletin reporter. Larry says chymopapain is effective in patients with sciatica, but is not generally effective for patients with back pain or whose leg pain is associated with chronic back pain.

John A. Burns School of Medicine pathology professor Eduardo Porta reports that "Vitamin E supplements in rats and mice delay or prevent the onset of cancers, liver damage, and coronary atherosclerosis. Vit E is an anti-oxidant that prevents free radicals (toxic chemicals formed in the cells) from developing. The National Institute of Health warns that no one should ingest more than 600 milligrams (sic) of Vit E per day . . . but many scientists in vitamin E research are taking high doses. I know one in his 70s taking 500 milligrams (sic) per day and claims that graying was prevented. The main thing is that the research in all of these centers in Japan, England, and Hawaii is showing that vitamin E seems to prevent or repair the key changes leading to the illness of old age. " *(Ed.: Local internist* **Nobu Nakasone** *has been saying this for 30 years.)*

Herbert Cohen, chief of the tuberculosis branch of the DOH, prescribes laughter because not only does it make a person feel good emotionally, but research indicates physical benefits. Studies have shown that arthritics have less pain after a bout of laughter and there is evidence that the body's natural painkillers, endorphins, and enkephalins are released.

George Underwood, Jr. was concerned about the misleading headline, "Pet Holds Hope for Asthmatics," following his presentation at the annual seminar of the Hawaii Society for Respiratory Therapy. George says, "It must be emphasized that marijuana in any form, or the active ingredient delta 9-THC in its current form, is not useful in the management of bronchial asthma, because of both the psychoactive effect and the bronchial irritation and spasm-provoking effect that occurs in many patients. " He hopes that research will be continued possibly to find a derivative that will provide bronchodilation without the toxic side effects.

Steven Moser of Wailuku is concerned about the growing crisis in the medical community of Maui caused by the rapid growth of the tourist industry. Maui Memorial Hospital was designed to handle the gradually growing population of Maui, not the rapid increase in tourist population that has doubled the ER visits, hospital admissions, and the physician population over the last 5 years. Steven says, "Uncontrolled tourism has the potential of terribly overburdening our systems of social health and undermining irreversibly the foundations of our psychological well-being. It is imperative that the people of Maui at least consider the short- and long-term effects of 'internationalization' of our airport and our Island. Our future should not solely be decided in the boardrooms of United or American Airlines; we must be allowed some input."

Hors de Combat

Reagan man **Bob Wong** wrote a letter to the (newspaper) editor on October 20, comparing the relative healths of the presidential candidates, i.e., the aging of President Reagan and the hypertension of Walter Mondale. "We are all aware of the problem of aging and for Reagan the 'elixir of youth' is not available at the present time. Former Vice President Mondale is fortunate in that there are antihypertensive medications available to him, but it is important to note that hypertension is not a benign disease and that treatment for this condition is not without hazards or complications. " Then Bob went on to mention the various adverse reactions of antihypertensive drugs taken from the AMA Drug Evaluations, the PDR etc. and with obvious prejudice concluded: "On election day a choice must be made between the older, healthy, vigorous, and established leader, Reagan, and Mondale, who still has the flush of youth on his face, but because of many years of antihypertensive medications has potential mental and emotional problems that should he become president would cause him to falter under a stressful situation."

Poor Bob. He must have been funning, but he raised a hornet's nest. A S. Higa declared it "Medical Electioneering" and wrote, "Surely Wong knows that all medications — including aspirin, antibiotics, and vitamins can have adverse side effects. Why all the technico-medical razzmatazz to prove his weak political argument? If the American people want a tranquilizer on November 6, they will numb themselves by voting for 'tranquil' Ron. " A Sue Cowing wrote under the heading, "Political Medicine" as follows: "Wong's letter is medical propaganda. It was his intention to speak with authority. He has abused his profession by manipulating that authority. In the process of trying to discredit Mondale out of hand, he has, by implication, stigmatized all those who have this disease and control it with drugs proscribed by their doctors. " By far the most telling blow came on November 14 from Dennis Meyer's "Political Diagnosis" (carefully timed to appear after the election), in which Dennis wrote: "The Hawaii Heart Association is not a political body, but as a member of the board of directors, I feel compelled to answer the statement from a purely medical point of view. It is true that many of the medications used in the treatment of high blood pressure have side effects. Reserpine was especially mentioned and I share Wong's bias against that drug, which can reproduce dangerous depressions that may alter decision-making abilities. With the exception of reserpine, however, the remainder of antihypertensive drugs in no way render the patient incapable of a full, vigorous, and dynamic life. The secret in avoiding the side effects of medicines is close follow-up by the physician who is aware of the potential drug reactions and remains on the look-out for them. The questions of the recent presidential campaign were those of qualification, performance, and track record. Those persons who would make Mondale's high blood pressure a political issue are as insulting to the 40 million persons in the United States who are hypertensive as are those people who insult senior citizens when they suggest that Reagan's age should disqualify his candidacy."

AMA President Joseph Boyle stated at the 128th annual HMA convention on Kauai that the AMA is going to court to challenge the 1984 Budget Reduction Act, which Congress had passed in July. "We feel the act is unconstitutional because it discriminates against people over 65 and interferes with the basic right of contract between doctors and patients."

He said, "The federal act does not allow doctors to bill Medicare patients directly and to negotiate payments with them. Instead, doctors work with medical health insurance carriers, which use set payment formulas that actually drive up the cost of medical care."

Rising malpractice insurance costs have forced family doctors on Molokai to begin turning down pregnant patients, but Molokai General Hospital officials may have resolved the problem by contracting with the Honolulu Medical Group to provide services. The Molokai General's only surgeon Monty Weeds is leaving. But the medical group needs to find physicians willing to stay on Molokai. If not, the pregnant women on Molokai face the prospect of having to leave the Island for regular pre-natal exams and for delivery of their babies.

Other physicians in Hawaii also are giving up delivering babies because the malpractice insurance rates for OB have risen fourfold in the past year. Kapiolani Medical Center is one of the few hospitals in the state that does not have a mandatory malpractice insurance requirement, but Kapiolani administrators are considering a change in that policy. Even **Ted Tseu,** chairman of the Hawaii Chapter of the American College of OB Gyn who delivers 100 to 125 babies a year, is considering giving up OB if Kapiolani requires malpractice coverage. Ted

has gone bare since four years ago when his premium was $10,000 a year. Today he would have to pay $30,000. Ted declares, "I'm not paying. I can't afford the ransom." But Ted does say he may change his mind if all Hawaii hospitals institute a mandatory malpractice rule. With a $30,000-a-year premium, Ted says each doctor will have to deliver 45 babies to break even. Malpractice insurance rates have risen because of the huge monetary damage awards and no one can predict the amounts they may be paying in years to come, especially since the injured party has at least 24 years in which to file a claim.

SHPDA voted 4-3 to disapprove Straub Clinic's application to open a family health clinic in the Windward Mall in Kaneohe. The proposal was "vigorously and acrimoniously" opposed by at least eight Windward Oahu doctors at the hearing at the state Capitol.

A Wailua resident has sued G.N. Wilcox Memorial Hospital on Kauai for $80,000 plus attorney and court costs because the hospital was negligent when its surgical team left pieces of gauze sponge during a mastectomy in 1980. The same surgeon removed the material eight months later, but was not named in the suit.

We were intrigued by Maui News reporter Jill Engledow's description of DRGs: "In terms of payment by Medicare to hospitals, the new system is something like a salad bar where one pays before eating. If the hospital were a restaurant, the owner would hope customers ate very little. In the old way of doing things, the hospital-restaurant charged by the item, a la carte, and it was to the owner's benefit if the customer ate liberally of a number of items, because Medicare would reimburse for whatever service or supply was used.

"DRGs affect only Medicare in-patients at present, but in July Medicare put a 15-month cap on doctors' fees and further regulations are forthcoming from the Feds. The state Medicaid system also is working its own DRG plan. Experts feel that it may be only a matter of time when the DRG concept spreads to other third-party payers like private insurance companies. One prediction is that as many as a thousand hospitals around the country will close because of inability to change enough to stay solvent under the new system."

However, **Stanley Snodgrass,** president of the Hospital Association of Hawaii, says, "The system is working. It's doing what it's supposed to do." The system is supposed to set up budget predictability so the federal government knows what kind of bills it can expect. It should restrain increases in cost of care, and affect physicians' practice patterns while placing the institution at financial risk if it doesn't tighten up its way of doing business. Snodgrass says that the cost per patient-day has risen, but the cost per admission and the per capita cost for acute care has dropped. The cost per day has gone up because those admitted were sicker and needed more intensive high technology care, but the cost per admission and per capita for acute care goes down because length of stay is shorter.

Entrepreneurs

Straub internist **Fred I. Gilbert Jr.** and insurance executive Thomas Wilkinson are new directors of Small Business Mutual, which has launched a chapter membership drive to fund its entry into the workers' compensation insurance business. The company organized by Small Business Hawaii (SBH) will have rates 25% below the normal market because, as President Paul Brown maintains, small businesses are less apt to have on-the-job accidents. Small Business Hawaii, which is soliciting its 2,500 members, says Small Business Mutual will be the state's first home-based mutual insurance company (a mutual is owned by its policyholders and has no stockholders). Charter members will be required to pay a one-time membership fee equal to 15% of the first year premium. The fees will be considered loans to the company and receive 6% annual interest until repaid. *(Ed.: With skyrocketing workers' compensation premiums, perhaps we should make inquiries.)*

Straub Clinic will purchase Dale Adams' Kailua practice and open Straub Clinic Kailua in Dale's office building on Uluniu Street. Straub plans to have two general internists in its new clinic who will apply for hospital privileges at Castle Medical Center.

The Honolulu Medical Group, Inc., has sold the Medical Group Building and surrounding property at Beretania and Lauhala streets to an affiliate of the Queen's Medical Center. The Queen's affiliate, the Queen Emma Foundation, in turn will lease the building and property back to the Honolulu Medical Group.

Vic Hay-Roe, president of the Medical Group said, "The transaction will help stabilize future health care costs . . . "

Wahiawa General Hospital administrators are seeking SHPDA approval to set up a home health care agency . . . Hospital VP David Sakata feels that the home health program from St. Francis and Straub hospitals are geared to serve the Honolulu area primarily while a Wahiawa agency could concentrate on needs in the surrounding areas . . .

The board members of Island Care (which was started on Jan. 1, 1981 with a loan from physicians of Kauai Medical Group) have agreed to sell the assets and liabilities of the HMO to Great West Hospitals, Inc., of Santa Ana, Calif. The sale of the non-profit corporation to the profit making company is subject to SHPDA approval. The 5,000 Kauai residents who subscribe to the health plan would receive the same benefits without cost raise according to Rex Coueh, medical director for Island Care . . .

Kaiser Foundation Health Plan, Inc which is construeting a medical center in Monalua has applied to SHPDA to build a 10 story outpatient clinic on Pensacola St. at an estimated cost of $31 million to replace its Ala Moana medical eenter scheduled to be torn down in early 1986 . . .

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CONTENTS

Continuing Medical Education—Local Ongoing Programs 86

A Lifestyle Change Program Associated With a Major Clinic and Hospital 90
Thomas M. Cashman, M.D., Harumi Sasaki, M.P.H., Charles J. Rose, Ph.D., and Robert I. McGee, Ph.D., Honolulu

HMA Auxiliary 99

Continuing Medical Education—Special Events 100

Use of Vinblastine-treated Platelets in Thrombocytopenias 102
Robert T.S. Jim, M.D.

In Memoriam 103

Parathyroid Carcinoma: A Case Report and Review 104
George O. McPheeters, M.D., and Catherine A. Bender, M.D., Honolulu

News & Notes 108
Henry Yokoyama, M.D.

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References: 1. Klimek JJ *et al: J Pediatr 96*:1087-1089, Jun 1980. 2. Schwartz RH *et al: Rev Infect Dis 4*:514-516, Mar-Apr 1982. 3. Cooper J, Inman JS, Dawson AF: *Practitioner 217*:804-809, Nov 1976. 4. Antibiotic Sensitivity Report, Winter 1983, BAC-DATA Medical Information Systems, Inc. 5. Data on file, Hoffmann-La Roche Inc., Nutley, NJ. 6. Wormser GP, Keusch GT, Heel RC: *Drugs 24*:459-518, Dec 1982. 7. *Med Lett Drugs Ther 23*:93-95, Oct 30, 1981.

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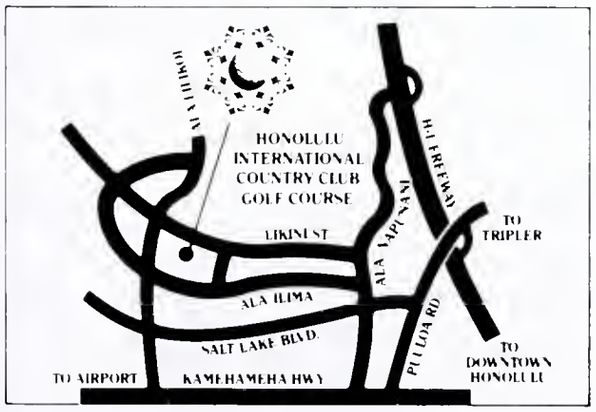
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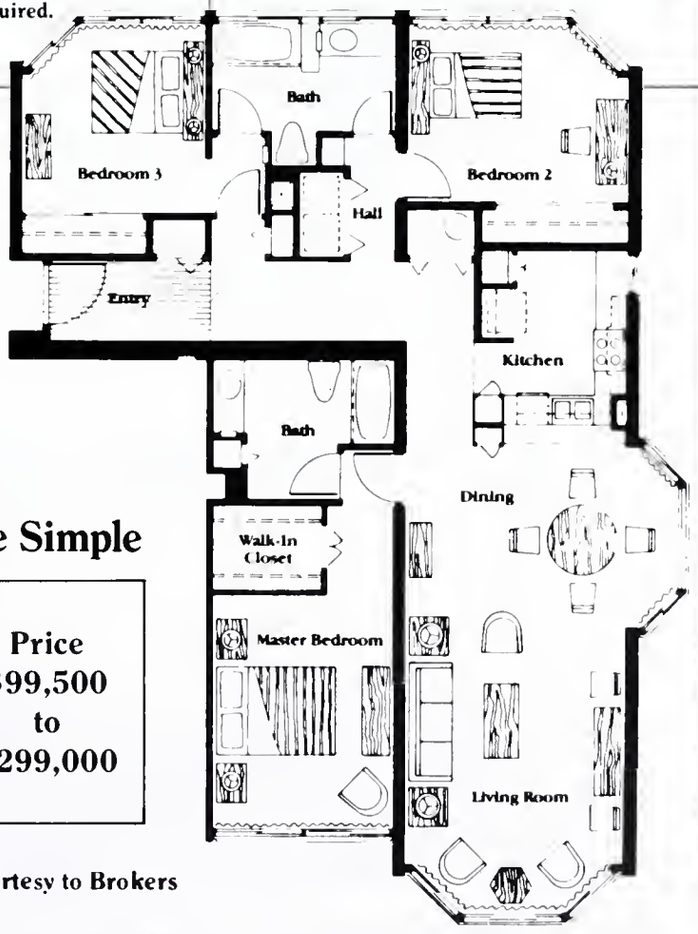
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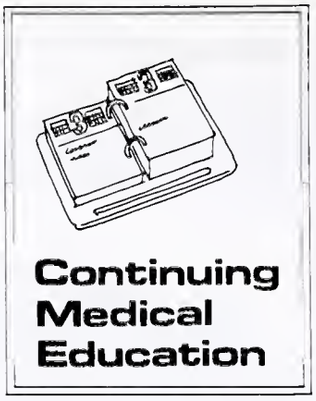
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2. Windward Oncology Conference, Second Tuesday, 12:30-1:30 p.m., Castle Medical Center Auditorium.
3. "Castle Cases," Fourth Tuesday, 12:30-1:30 p.m., Castle Medical Center Auditorium.
4. Kona Tumor Board, Second Friday, 7:30-8:30 a.m., Kona Hospital.

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 - C. Endocrinology Grand Rounds, First Tuesday, 6:30-7:30 p.m., Queen's University Tower, Room 506.
 - D. UH-Queen's Conference, Every Friday, 8:00-9:00 a.m., Queen's Medical Center, Mabel Smyth Auditorium.
 - E. Cardiology Grand Rounds, Third Tuesday, 7:30-8:30 p.m., Queen's University Tower, Room 508.
 - F. Infectious Disease Grand Rounds, Second and Fourth Tuesdays, 5:00-6:00 p.m., Queen's Nalani 1 Conference Room.
 - G. Dermatology Grand Rounds, Second Wednesday, 7:30-9:30 a.m., Queen's Medical Center, Queen Emma Clinic.
 - H. Pulmonary Grand Rounds, Fourth Monday, 12:30-1:30 p.m., Queen's Medical Center, Kamehameha Lounge.
 - I. Nuclear Medicine Grand Rounds, Third Wednesday, 5:00-6:30 p.m., Straub Clinic & Hospital, Doctors' Dining Room.
 - J. Medical-Surgical GI Grand Rounds, Third Friday, 12:45-1:45 p.m., Kuakini Hospital, PB4 Classroom.
2. Dept. of Obstetrics and Gynecology
 - *A. Grand Rounds, Every Wednesday, 7:30-8:30 a.m., Kapiolani Women's & Children's Medical Center, Second Floor Auditorium.
 - B. Tuesday Conference, Tuesdays, 1:00-2:00 p.m., Kapiolani Women's & Children's Medical Center, Second Floor Auditorium.
3. Division of Orthopedics
 - A. Fracture Conference, Mondays, 5:00-6:00 p.m., Queen's University Tower, Room 618.
 - B. Shriner's Tuesday Conference, Tuesdays, 7:15-8:15 a.m., Shriners Children's Hospital, Auditorium.
4. Dept. of Pediatrics
 - A. Grand Rounds, Thursdays, 8:00-9:00 a.m., Kapiolani Women's & Children's Medical Center, Second Floor Auditorium.
 - B. Monday Noon Conference, 12:45-1:45 p.m., Kapiolani Women's & Children's Medical Center, Second Floor Auditorium.
 - C. Pediatric Infectious Disease Conference, Thursdays, 12:30-1:30 p.m., Kapiolani Women's & Children's Medical Center, Third Floor Conference Room.
 - D. Perinatal Grand Rounds, Fridays, 8:15-9:15 a.m., Kapiolani Women's & Children's Medical Center, Conference Room B.
5. Dept. of Psychiatry
 - A. Grand Rounds, Fridays, 8:00-9:30 a.m., Queen's University Tower, Room 618.
6. Dept. of Surgery
 - A. Grand Rounds, First, Second, and Third Saturdays, 7:30-9:00 a.m., rotating hospitals.
 - B. Statistical M&M, last Saturday, 7:30-9:00 a.m., rotating hospitals.
 - C. Journal Club, First and Third Tuesdays, 6:00-8:00 p.m., Queen's University Tower, Room 620.
 - D. Medical-Surgical GI Grand Rounds, Third Friday, 12:45-1:45 p.m., Kuakini Medical Center, PB4 Classroom.
 - E. Pediatric Surgical Grand Rounds, First Friday, 12:45-1:45 p.m., Kapiolani Women's & Children's Medical Center, Conference Room B.

(Continued on page 89)

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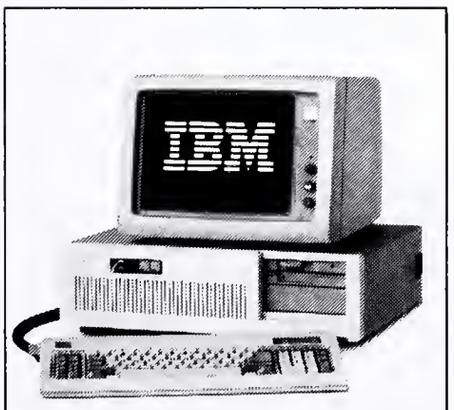
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CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

(Continued from page 86)

F. Basic Science Lecture, Wednesdays, 7:15-8:15 a.m., Queen's University Tower, Room 618.

7. Dept. of Family Practice
 *A. Conference, Fourth Tuesday, 1:00-2:00 p.m., Kapiolani Women's & Children's Medical Center, Executive Dining Room.
8. Dept. of Pathology
 A. Neuropathology Conference, First Saturday, 8:00-9:00 a.m., St. Francis Hospital, Sullivan IV Classroom.

For further information on any of these programs, please call the Continuing Medical Education office at 948-6949.

Castle Medical Center

1. CME Programs, First and Third Tuesday, 12:30-1:30 p.m., Castle Medical Center's Auditorium. (For further information call the Medical Staff Office, 263-5360.)

G.N. Wilcox Memorial Hospital

1. General Medical Staff Meeting, Quarterly in January, April, July, and October, 7:30 p.m., Hospital Conference Room.
2. Clinical Review, Every Monday, 12:00-2:00 p.m., Hospital Conference Room.
3. Physicians' Tumor Conference, First Thursday, 12:00-2:00 p.m., Hospital Board Room.

Hawaii Medical Association

1. HMA Maternal and Perinatal Mortality Study Committee, First Monday, 5:30 p.m., 320 Ward Ave., Suite 200, Cat. 1 on hr. for hr. basis. (Call 536-7702 to confirm meeting schedule.)

Hawaii Ophthalmological Society

1. Monthly Dinner Meeting, Third Thursday of each month (except July, August, and December), 6:30-9:30 p.m., The Pacific Club.

Hawaii Thoracic Society

1. Visiting Professorship Program, week of April 15, 8 programs, time and place to be announced. Contact: Rosemary Respicio.
2. Sinclair Chest Club, April 17, Outrigger Canoe Club, Clifford Zwillich, M.D. Topics to be announced. Contact: Rosemary Respicio.

Hilo Hospital

1. Radiology Conference, First Friday, 12:30-1:30 p.m., Doctor's Conference Room.
2. Tumor Conference, Second Friday, 12:30-1:30 p.m., Doctor's Conference Room.
3. Cardiology Conference/Clinical Department Update for Medical Staff, Third Friday, 12:30-1:30 p.m., Doctor's Conference Room.
4. Pathology Conference/Morbidity-Mortality Review, Fourth Friday, 12:30-1:30 p.m., Doctor's Conference Room.
5. Visiting Professor Program/Network for Continuing Medical Education Tapes (ETV), Saturdays, 7:00-8:00 a.m., Doctor's Conference Room.

For further information call Administration at 961-4255.

Kaiser Foundation Hospital

1. Obstetrics/Pathology Conference, First Monday of every month, 8:00-9:00 a.m., Garden Lanai, Pacific Building.
2. *Medicine Grand Rounds, Every Tuesday, 8:00-9:00 a.m., Auditorium, Pacific Building.
3. Tumor Board, Every Tuesday, 12:00-1:00 p.m., Auditorium, Pacific Building.
4. Orthopedic Conference, Every Wednesday, 8:30-9:30 a.m., Garden Lanai, Pacific Building.
5. Pathology Conference, Every Friday, 7:00-8:00 a.m., Auditorium, Pacific Building.
6. Surgical Grand Rounds, Every Friday, 8:00-9:00 a.m., Auditorium, Pacific Building.
7. *Saturday Educational Conference, Every Saturday, 7:30-9:00 a.m., Auditorium, Pacific Building. (Call CME office at 944-6145 for more information).
8. Obstetrics/Perinatal Conference, Last Tuesday of the month, 8:00-9:00 a.m., Garden Lanai, Pacific Building.

Kuakini Medical Center

1. Visiting Professor Lectures (ongoing).
2. Guest Lecturers (ongoing).
3. Nephrology Conference, First Monday, 12:00-1:00 p.m., Makai Conference Room.
4. Dept. of Ophthalmology Meeting, First Tuesday, 12:30-1:30 p.m., Private Dining Room.
5. Medical Mortality and Morbidity Conference, Fourth Tuesday, 1:00-2:00 p.m., Hale Pulama Mau Auditorium.
6. GI Conference, Second Wednesday, 12:30-1:30 p.m., Makai Conference Room.
7. Pulmonary Conference, Second Thursday, 1:00-2:00 p.m., Makai Conference Room.
8. Hematology Conference, Third Thursday, 12:30-1:30 p.m., Makai Conference Room.
9. Oncology Conference, Every Thursday, 7:30-8:30 a.m., PB-5 Conference Room.
10. Cardiology Conference, Fourth Thursday, 12:30-1:30 p.m., Makai Conference Room.
11. Surgical Conference, First Friday, 12:40-1:45 p.m., PB-5 Conference Room.
12. Surgical-Emergency Department-Trauma Conference, Second Friday, 12:45-1:45 p.m., PB-5 Conference Room.
13. Surgical Mortality and Morbidity Conference, Last Friday, 12:45-1:45 p.m., PB-5 Conference Room.

Maui Memorial Hospital

1. Dept. of Medicine, First Thursday, 7:00-8:00 a.m., Auditorium.
2. Dept. of Surgery, Second Thursday, 7:00-8:00 a.m., Auditorium.
3. Dept. of Obstetrics and Gynecology, Third Thursday, 7:00-8:00 a.m., Auditorium.
4. Dept. of Pediatrics, Fourth Thursday, 7:00-8:00 a.m., Auditorium.
5. Fifth Thursday Meeting, 7:00-8:00 a.m., Auditorium.
6. Tumor Board, Second Friday, 7:00-8:00 a.m., Multi-purpose Room.
7. Anesthesia Conference, Second Wednesday, 7:00-8:00 a.m., Dining Room.

The Queen's Medical Center

1. QMC Cardiology Rounds, Every Wednesday, 9:00-10:00 a.m., Kam Auditorium.
2. Emergency Medicine Conference, First Monday, 7:00-8:00 a.m., Harkness Board Room.
3. ENT Conference, First and Second Fridays, 7:30-8:30 a.m., Small Dining Room.
4. QMC-UH Medical Conference, Every Friday, 8:00-9:00 a.m., Mabel Smyth Auditorium.
5. MICU Lecture, Tuesday and Thursday, 9:00-10:00 a.m., Pauahi 6.
6. OB/GYN Conference, Every Monday, 1:00-2:00 p.m., Kam Auditorium.
7. Ophthalmology Conference, Fourth Tuesday, 4:45-6:00 p.m., Queen Emma Eye Clinic.
8. Orthopedic Conference, Every Wednesday, 7:00-8:00 a.m., Kam Auditorium.
9. Pathology Conference, Every Wednesday, 7:00-8:00 a.m., Nalani 1 Conference Room.
10. Pediatrics Conference, Fourth Thursday, 12:30-1:20 p.m., Harkness Board Room.
11. Psychiatry Conference, Fourth Tuesday, 7:30-8:30 a.m., Kekela Gym.
12. Trauma Conference, Every Tuesday, 7:30-8:30 a.m., Kam Auditorium.
13. Surgical Conference, Every Tuesday, 4:30-5:30 p.m., Kam Auditorium.

St. Francis Hospital

1. Oncology Conference, Every Monday, 7:30-8:30 a.m., Sullivan IV Classroom.
2. EENT Meeting, First Tuesday, 7:30-8:30 a.m., Sullivan IV Classroom.
3. Surgery Grand Rounds, First, Second, and Third Fridays, 7:30-8:30 a.m., Sullivan IV Classroom.
4. Medicine Morbidity and Mortality Conference, Second Tuesday, 7:30-8:30 a.m., Auditorium (for SFH staff members only).
5. Hematology Conference, Third Thursday, 12:30-1:30 p.m., Sullivan IV Classroom.
6. Visiting Professor Programs (contact Medical Education Office at 547-6497 for further information).

Straub Clinic & Hospital

1. Friday Noon Conference, Every Friday, 12:30-1:30 p.m., Doctors' Dining Room.
2. Patient Care Conference, Second Tuesday, 5:00-6:00 p.m., Doctors' Dining Room.
3. Medical Morbidity and Mortality Conference, Third Tuesday, 7:00-8:00 a.m., Doctors' Dining Room.
4. Cardiac Surgery Conference, Fourth Tuesday, 4:30-5:30 p.m., Doctors' Dining Room.
5. Community Peripheral Vascular Conference, Third Thursday, 5:00-6:30 p.m., Doctors' Dining Room.
6. Neuropathology Conference, Fourth Saturday, 8:00-9:00 a.m., Doctors' Dining Room.
7. Surgical Morbidity and Mortality Conference, Fourth Thursday, 7:00-8:00 a.m., Doctors' Dining Room.
8. Department of Anesthesiology, Second Tuesday, 7:00-8:00 a.m., Doctors' Dining Room.
9. Visiting Professor Conference, periodically on Thursday, 7:00-8:00 a.m., Doctors' Dining Room. (For further information call the Office of Professional Activities, 523-2311, ext. 8152.)

* Note: All conferences are subject to change. Monthly calendar is available upon request.

Wahiawa General Hospital

1. CME Program, Every Tuesday, 1:00-2:00 p.m., Conference Room.

Erratum

RE: H. Med. J. 44:50, 1985; 1984 Annual Meeting Sportsmen's Awards

"Golf: John Felix Perpetual Trophy (low gross): Robert H. Oishi, M.D. should read"

" John Felix Perpetual Trophy (low gross): Coolidge Wakai, M.D."

A Lifestyle Change Program Associated With a Major Clinic and Hospital—

A 2-Year Follow-Up of Prepaid (HMO) Plan Members

Thomas M. Cashman, M.D., Harumi Sasaki, M.P.H.,
Charles J. Rose, Ph.D., and Robert I. McGee, Ph.D., Honolulu

• *Recent interest in healthful lifestyles has increased research and intervention in the field of health promotion. Literature has grown in this field, supporting the effect of behaviors such as exercise, diet and stress control as beneficial to populations. However, formal evaluation of interventions designed to produce desired health effects has lagged or been dealt with anecdotally rather than with systemic research procedures. This paper describes a formal evaluation of a health promotion program at the Straub Clinic and Hospital, in which we tried to answer the question: Did this program influence the physiological and psychological condition of participants from the beginning of the program (pre) compared to 2 years later (post)?*

Data now link lifestyle to many illnesses and suggest that 40 to 50% of our health problems are related to the way we lead our lives, while another 20% are related to environment.[1]

The cost of health care in the United States, as a percentage of the Gross National Product (GNP), has risen from 4% in 1940 to almost 10% in 1981. Some projections indicate that the per capita expense will triple in the next 10 years and that by 1990 we will spend $821 billion annually on health care needs.[2] Medical costs are the most rapidly growing expense in business. U.S. industry loses 200,000 individuals a year to cardiovascular disease alone. The cost to replace these workers is estimated to be $700 million annually; to replace one executive may cost as much as $600,000.[3] Some employers now direct efforts towards keeping their staffs well as a method of cost-containment. Employee programs focus on stress management, fitness, nutrition, smoking cessation, and alcohol addiction rehabilitation.[4] They hope to improve productivity and limit medical costs by emphasizing prevention.

Many people question the notion that more doctors, hospitals and medical technology will necessarily lead to improvement in the nation's health status. Donald B. Ardell illustrates this concept in his book, "High Level Wellness."[5] In it he writes, "Modern medicine is a wonderful thing but there are two problems: people expect too much of it and too little of themselves." In short, we are discovering that health depends more on lifestyle, environment, and cultural factors. The 1977 Surgeon General's Report, "Healthy People,"[6] strongly advocates dramatic changes in health care, emphasizing protection from environmental hazards and more preventive measures in the personal health of individuals.

In 1979, the American Hospital Association encouraged hospitals "to take a leadership role in helping the good health of their communities . . . and (to) estab-

TABLE 1

Parameters Measured in Pre and Post Study

1. Medical history and physical
2. Physiological data included
 a. blood pressure
 b. FVC, FEV_1
 c. heart rate
 d. height, weight
 e. treadmill stress test time (Bruce protocol)
3. Biochemical/laboratory data included
 a. Hgb, Hct, RBC, indices
 b. SMA-12*
 c. LDL, HDL cholesterol†
4. Three-day diet (pre only)

*Ca++, P, glucose, BUN, uric acid, cholesterol. Total protein, albumin, bilirubin, alk. phos., LDH, SGOT.

†Mg Cl ppt. method

TABLE 2

Matching Groups

	Study Group				Control Group			
	DOB	Sex	Race	Weight	DOB	Sex	Race	Weight
1.	1943	F	J	117	1943	F	J	107
2.	1922	M	W	193	1922	M	W	210
3.	1936	F	W	118	1922	F	W	121
4.	1939	F	W	172	1939	F	W	180
5.	1930	F	W	165	1930	F	W	155
6.	1946	F	W	96	1946	F	W	107
7.	1942	F	W	126	1942	F	W	125
8.	1946	M	W	153	1946	M	W	158
9.	1936	F	W	111	1936	F	W	135
10.	1923	M	W	152	1923	M	W	150
11.	1924	F	W	112	1924	F	W	124
12.	1924	F	W	131	1924	F	W	123
13.	1919	M	J	160	1919	M	J	145
14.	1927	F	W	146	1927	F	W	141
15.	1923	F	W	148	1923	F	W	134
16.	1936	F	W	196	1936	F	W	217
17.	1946	F	W	120	1946	F	W	128
18.	1940	F	W	126	1940	F	W	114

From The Department of Health Management Systems, Straub Clinic and Hospital, Honolulu, Hawaii and the School of Public Health, University of Hawaii, Honolulu, Hawaii.

This paper was presented in part to the First International Symposium on Public Health in Asia and the Pacific Basin, March 7, 1983, Honolulu, Hawaii.

Accepted for publication July 1984.

lish the hospital as an institution in the community that is concerned about good health in addition to (being) concerned about treating illness."[7] Today, there are an estimated 10 or more hospital-based wellness centers throughout the U.S. and an additional 2,000 hospitals are offering regular health education programs. The Straub Clinic and Hospital developed such a program in 1979. The goal was to teach health promotion to our patients, in a way that would change their behavior and improve health.

The Straub Program

A 12-week lifestyle change program was developed in a didactic/experiential format with the philosophic basis that success depends on paying attention to the total individual and how he relates to his environment.

Participants were evaluated prior to entering the program, using the parameters listed in Table 1. The course consisted of the following: (1) 10 hours of stress management, lifestyle analysis, and relaxation training; usually given on three consecutive Saturday mornings. (2) 4 hours of lectures on nutrition, which included: (a) food groups, U.S. dietary goals, dietary trends, percent calories from fat in foods, protein needs, menu choices; (b) the role of diet in cardiovascular disease; (c) food additives, fiber, vitamins and minerals, caffeine, and alcohol; (d) protein classification, food labels, and energy sources. (3) 5 hours of lectures on exercise physiology, which included: (a) the 3 components of exercise, motivation, benefits; (b) target heart rate; (c) stretch and strengthen; (d) posture and back care; (e) planning one's own exercise program; and an "exercise shopping trip" of weekly visits to various fitness resources in the community. The nutrition and exercise part of the program occurred on weekday evenings (2 times a week).

An individual nutrition and exercise consultation was also offered as part of the course, and at this time diet and exercise goals were set. A 3-times-weekly walk/run program was held at a local park for current course members and graduates. Everyone was encouraged to attend 2 sessions a week and classes could be made up or repeated during future courses without charge.

Staff included a physician director; a nutritionist and physical educator, both with master's degrees in adult education; a nurse coordinator, M.P.H.; and a psychologist.

Utilization data ($ spent on health care) for 1980 through 1982 was compared on 18 of our participants who could be matched for age, sex, race and weight to a control group of our HMO members who were enrolled during the same time (Table 2). Data prior to 1980 was not available.

TABLE 3
Comparison of Parent & Sample Population

Variables	Parent Population	(n = 215)	Sample Population	(n = 30)
Sex	Male	26.9%		36.6%
	Female	73.1%		63.3%
Ethnicity	Caucasian	75.5%		76.6%
	Oriental	13.1%		13.4%
	Others	11.4%		10.0%
Smoker		19.5%		26.6%
Use alcohol		79.4%		80.0%
Exercise*	Sedentary	20.4%		40.0%
	Mild	51.1%		13.3%
	Occasional	13.3%		13.3%
	Active	15.1%		33.3%
Blood Pressure	Mean of Pop.	119/76		120/78
Weight		155.0		160.0
Glucose		104.4		101.0
Triglycerides		120.5		122.0
Cholesterol		210.8		218.0
LDL cholesterol		134.2		156.5
HDL cholesterol		52.7		51.9
Uric acid		5.6		5.6
Hemoglobin		13.7		14.0
Heart rate		—		67.0
FVC		3.0		3.7
FVC%		77.0		92.4
FEV-1		2.6		3.2
FEV-1%		74.0		86.7
Treadmill stress time (min) (Standard Bruce protocol)		10.2		10.2

*Sedentary—Little or no exercise Mild—Little exercise with the job or housework
Occasional—Irregular vigorous exercise
Active—Regular exercise program at least 3/week or hard physical work on the job

TABLE 4
Two-Year Change in Mean Values for Participants (n = 30)

Variables	Pre	Post	Significant Level of Change
Glucose	101.0	95.0	0.023*
Triglycerides	122.0	108.0	0.024*
Cholesterol	218.0	201.0	0.097
LDL	156.5	124.1	0.021*
HDL	51.9	43.7	0.014*
LDL/HDL	3.2	2.9	0.312
Uric acid	5.6	5.2	0.041*
Hemoglobin	14.0	14.0	0.629
Systolic BP	120.0	119.0	0.530
Diastolic BP	77.7	77.0	0.656
FVC	3.7	3.8	0.618
FVC%	92.4	87.2	0.450
FEV-1	3.2	3.3	0.929
FEV-1%	86.7	76.5	0.123
Heart Rate	67.0	58.0	0.068
Weight	160.0	160.0	0.798

*Significant at $<.05$ level.

TABLE 5
Change in Alcohol, Tobacco, and Exercise by Group
Overall number of participants

	No Change	Positive Change	Negative Change	Net Positive Change
Alcohol	18	7	2	5
Tobacco	22	5	1	4
Exercise	16	11	1	10*
Younger				
Alcohol	10	3	1	2
Tobacco	12	1	1	0
Exercise	9	4	1	3
Older				
Alcohol	8	4	1	3
Tobacco	10	4	0	4
Exercise	7	7	0	7*

*Statistically significant

TABLE 6

Comparison of Mean Value in Older & Younger Populations at Baseline

Variables	Older N = 16	Younger N = 14	Difference (0-4)	Significance Level of Change
Glucose	104.0	99.0	−5.0	.05*
Triglycerides	127.0	117.0	−10.0	.74
Cholesterol	218.0	219.0	−1.0	.97
LDL	162.0	150.0	2.0	.61
HDL	51.0	52.0	−1.0	.93
LDL/HDL	3.1	3.4	−.3	.63
Uric acid	5.2	6.0	−.8	.22
Hemoglobin	14.0	14.0	0	.96
Systolic blood pressure	118.0	123.0	−5.0	.36
Diastolic blood pressure	76.0	79.0	−3.0	.41
FVC	3.5	3.9	−.4	.40
FVC %	91.0	93.0	−2.0	.50
FEV 1	3.0	3.5	−.5	.10
FEV 1%	86.0	87.0	−1.0	.70
Heart rate	66.6	68.2	−1.6	.77
Weight	153.0	167.0	−14.0	.48

*Significant at <.05 level.

TABLE 7

Two-Year Change in Mean Value from Pre to Post for 16 Participants within the Older Group

Variable	Pre	Post	Change (Pre-Post)	Significance Level of Change
Glucose	104.0	95.0	5.0	.02*
Triglycerides	127.0	110.0	17.0	.09
Cholesterol	218.0	198.0	20.0	.29
LDL	162.0	114.0	48.0	.05*
HDL	51.0	39.0	12.0	.02*
LDL/HDL	3.1	2.7	.4	.32
Uric acid	5.2	5.0	.2	.27
Hemoglobin	14.0	14.0	0	.27
Systolic blood pressure	118.0	119.0	−1.0	.75
Diastolic blood pressure	76.0	77.0	−1.0	.64
FVC	3.5	3.3	.2	.60
FVC %	91.0	85.0	6.0	.50
FEV-1	3.0	2.8	.2	.60
FEV 1%	86.0	75.0	11.0	.30
Heart rate	66.0	58.0	8.0	.31
Weight	153.0	158.0	−5.0	.35

*Significant at <.05 level.

TABLE 8

Two-Year Change from Pre to Post in Mean Values for 14 Participants within the Younger Group

Variable	Pre	Post	Change (Pre-Post)	Significance Level of Change
Glucose	99.0	95.0	4.0	.37
Triglycerides	117.0	105.0	12.0	.15
Cholesterol	219.0	204.0	15.0	.11
LDL	150.0	135.0	15.0	.18
HDL	52.0	48.0	4.0	.29
LDL/HDL	3.4	3.2	.2	.69
Uric acid	6.0	5.4	.6	.09
Hemoglobin	14.0	14.0	0	.78
Systolic blood pressure	123.0	118.0	5.0	.14
Diastolic blood pressure	79.0	76.0	3.0	.30
FVC	3.9	4.3	−.4	.02*
FVC %	93.0	88.0	5.0	.60
FEV-1	3.5	3.7	−.2	.08
FEV 1%	87.0	77.0	10.0	.20
Heart rate	68.0	59.0	9.0	.14
Weight	167.0	163.0	4.0	.16

*Significance at the <.05 level.

From 1979 until 1982, 415 people participated in the program. Age range was 17 to 85 and the majority were female, middle class and caucasian.[8] Those with medical problems which contraindicated the exercise regime were not admitted into the program. The participants were self-selected and many were showing some evidence of lifestyle related chronic disease.

Procedure

A pre/post design was the basis of analysis. The pre-measurements were completed on individuals before the program began and post-measurements were taken 2 years later.

A total of 215 participants completed the program in the first 2 years. However, only 48 of these could be considered for the study, since this was the number enrolled in a pre-paid health insurance (HMO) plan which covered the costs of the follow-up examinations. Of the 48 who were asked to return for medical re-evaluation, 30 responded. These 30 comprised the population base for the pre/post design. The variables measured for the study are shown in Table 1.

A comparison of this group with the parent population revealed generally similar characteristics (Table 3). There were exercise differences, however, with twice as many of the sample group reporting regular exercise.

Baseline and 2-year follow-up measures included tobacco and alcohol consumption, exercise levels, and a number of physiological and biochemical parameters. In addition, at "post," questionnaires on lifestyle changes were distributed to 100 participants, including the 48 covered by the prepaid insurance and 52 other randomly selected participants; of those, 38 responded. There were 21 from the sample group. Treadmill changes from pre- to post- were recorded on 14 subjects, all 40 years or older.

The significance of pre/post change was determined by the paired t-test. The analysis was also replicated within older (< age 40, N = 14). McNemar's test was used to test for significant change in alcohol, smoking, and exercise for the three groups.

Results

A significant decrease in blood glucose, triglycerides, uric acid, LDL and HDL cholesterol was noted in the group 2 years after the beginning of the program (Table 4).

Review of alcohol and tobacco consumption indicated no change. There was a significant change in reported exercise levels in the older group (Table 5), however, treadmill times did not improve. The mean treadmill time was 10.1 min. pre, and 10.2 min. post.

When the data were partitioned by age at roughly the mean age (40), mean values were not different except for glucose (Table 6). At 2 years, however, a number of statistically significant findings appeared, in spite of the extremely small numbers (16 older and 14 younger). There was significant decrease in LDL and HDL cholesterol and blood glucose in the older group (Table 7) while the younger showed a significant increase in FVC (Table 8).

Of the 38 who filled out a mail-in questionnaire at the 2-year follow-up, 76% stated they had maintained changes in eating habits, exercise and stress reduction over the 2-year period, and felt better physically and mentally. About 60% reported improvement in physical appearance due to weight loss, and 87% stated the program had helped them change their lifestyle.

Reviewing cost data of the 30-member study group (Fig. 1) showed a 12% decrease in medical costs ($3,010) from 1980 to 1981 with a 70% rise, in costs from 1981 to 1982. There was a 50% increase in costs over the 2-year period. The total cost of delivering the program and the 2-year follow-up was $18,730. Each member contributed $110 toward the education program reducing that expense to $15,430.

When we compared the matched groups (Fig. 2), the study group showed a higher utilization then did the controls. We did not match for diagnosis but we noticed that several surgeries occurred in our participants and not in the controls. In 1980 and 1982 about $4,000 was spent each year for surgery (1 plastic), whereas none was spent in the control group. In 1981 about $300 was spent on surgery in the control group and none in our study group.

Both groups showed a yearly increase in medical costs 24% versus 49%, study versus control groups in 1981, and 62% versus 38%, study versus control in 1982. The total increase in expense over the 2-year period was 101% versus 172%, study versus control.

Fig. 1 Utilization Data Study Group (N = 30) 1980-1982

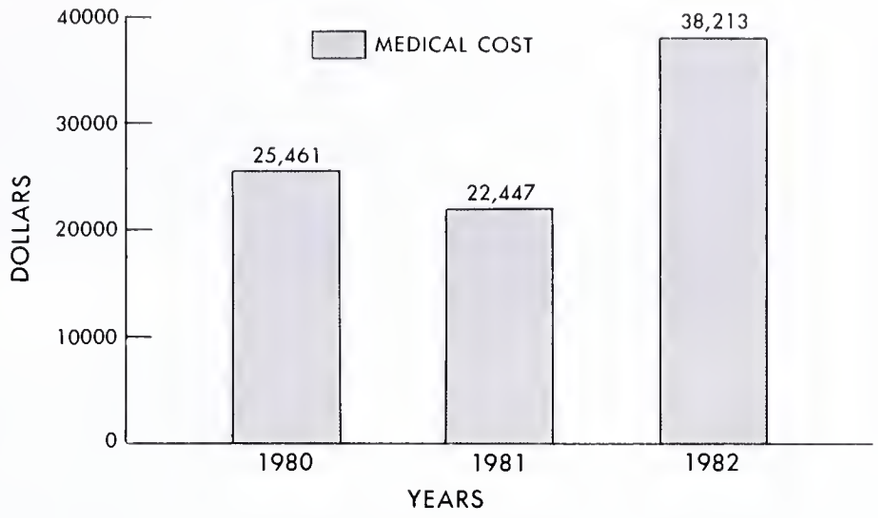
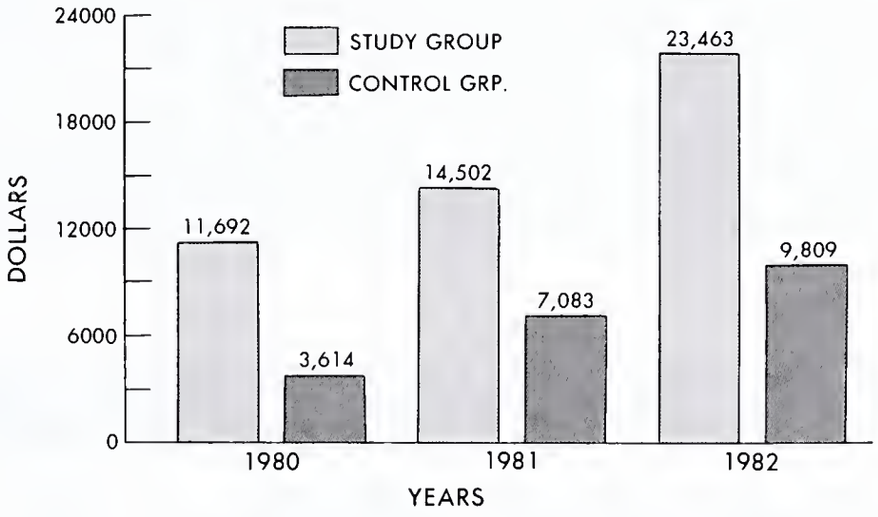


Fig. 2 Comparison of Utilization Data Matched Controls (N = 18 Each Group)



Discussion

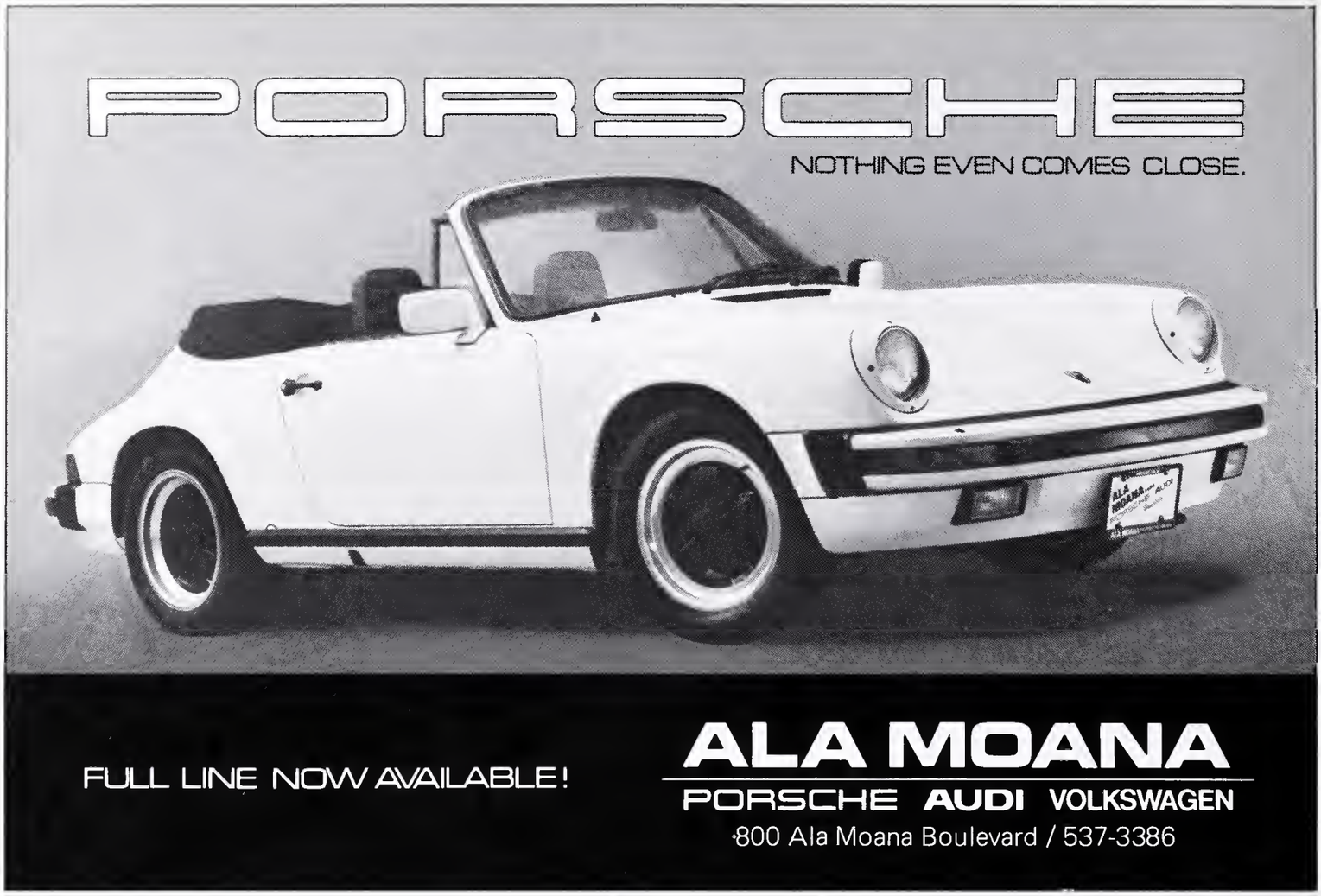
Significant lowering of blood values did occur in glucose, triglycerides, uric acid and LDL cholesterol, which are factors associated with increased risk for coronary heart disease.[9, 10] HDL cholesterol also decreased even though our group reported they were exercising regularly. However, their treadmill stress test time did not improve and increases in HDL cholesterol do not occur in men unless they are running more than 10 miles a week.[11] The significant lowering of the above blood values remains unexplained within the limits of this study, but the most likely cause is lower fat intake. Most of our participants report that they persist with nutritional improvement. Decreases in serum cholesterol due to dietary changes have been well established;[12,13] changes in blood uric acid also reflect the reported decrease in consumption of animal products; and blood glucose levels are modified by both diet and exercise.[9]

The improvement in Forced Vital Capacity (FVC) in our younger group may be the result of some improvement in physical fitness.[14] The treadmill data were taken on the older participants, and although treadmill times were not improved, many participants reported they felt better because of their exercise program. Recreational exercise does cause improved self esteem, energy, and intellectual functioning.[15, 16] One individual entered the program with the complaint of fatigue so incapacitating that he had difficulty getting through his day. He demonstrated very little increase in his treadmill time 2 years later, although he was observed to exercise almost daily. He felt there was such improvement in his energy, as a direct result of his exercise program, that he started a second business. Other measures we might also expect to improve did not: namely, weight and blood pressure; and probably reflect that the exercise regimen of the group as a whole is not vigorous enough to effect such changes.

Our utilization data is derived from small numbers and this may explain some of the confusion. About $12,000 was spent in the delivery system and 2-year follow-up of 18 participants in our Lifestyle Change Program. This represented about 58% of the total cost of medical care of the control group from 1980 to 1982. Of our study group, it represented about 24% of the study group cost if the cost of the program and follow-up study was excluded.

The lifestyle program was self-selected and obviously attracted members who utilized more. The program may attract a sicker group with greater concerns about its health. They may also represent a group who is more assertive about its benefits and more demanding of services.

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were reduced for 1 year following, as compared to controls. If costs increased at the rate of the control group of 96%, there would have been an increase of $11,232 rather than $2,800, suggesting a net savings of $8,400. Increase in the total cost of medical care for the study group over 2 years was $11,700 (101%) and for the control group was $6,200 (172%). If we assumed the worse, an increase in costs by 172% in the study group without the intervention, total cost for 1982 would have increased by $20,100 instead of $11,770 with total cost of $31,800 for the year 1982. Assuming that these increases would occur the program expenditure of $12,000 resulted in a saving of $8,400 the first year, reducing the increase over $11,692 to 24% rather than 96% and $8,300 the second year, reducing the increase over $11,692 to 101% rather than 172%. The 18 participants also contributed $110 each in tuition, increasing the savings to the provider by about another $2,000. However, these groups are so different with respect to medical utilization that in spite of our efforts to control them they still may contain unknown variables confusing the issue.

It is still unclear from these data whether this program is cost effective in our prepaid medical insurance program. It does seem, however, that we identified a group of high utilizers and were able to modify their health care costs.

Another implication of these results is that by changing risk factors, the incidence of disease in a population can change, especially in cardiovascular disease.[9, 10, 11, 12, 17] Long-term follow-up is necessary. Another important implication is reduction of health care utilization with health improvement. This is an important consideration for prepaid health insurance programs and for health care costs in general.

Our clients overwhelmingly report improvement in quality of life, as shown by a more positive outlook, better self-confidence, and more energy. This improvement in outlook undoubtedly reflects their reports of feeling and looking better without confirmed weight loss or improved measured aerobic capacity. We did not measure these psychological changes in systematic fashion. Obviously, people do tend to feel better when they perceive something is being done to help them.

Our program is presently targeted to well people in a preventive framework. We have tailored a program for cardiac rehabilitation and can do so for other illnesses. Programs such as these enable us not only to treat the biological disease in terms of lesion involvement, but also to better deal with the total behavioral response to the illness. Our experience indicates that the program is safe. We had no major mishaps even though many of the participants had significant illnesses including cardiovascular diseases.

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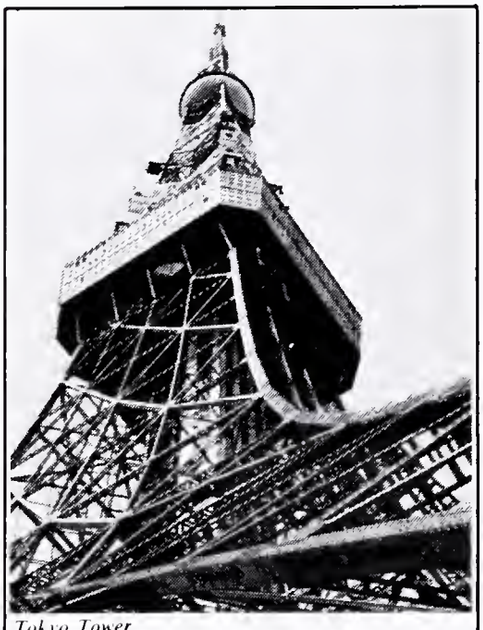
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unto us a son is given:
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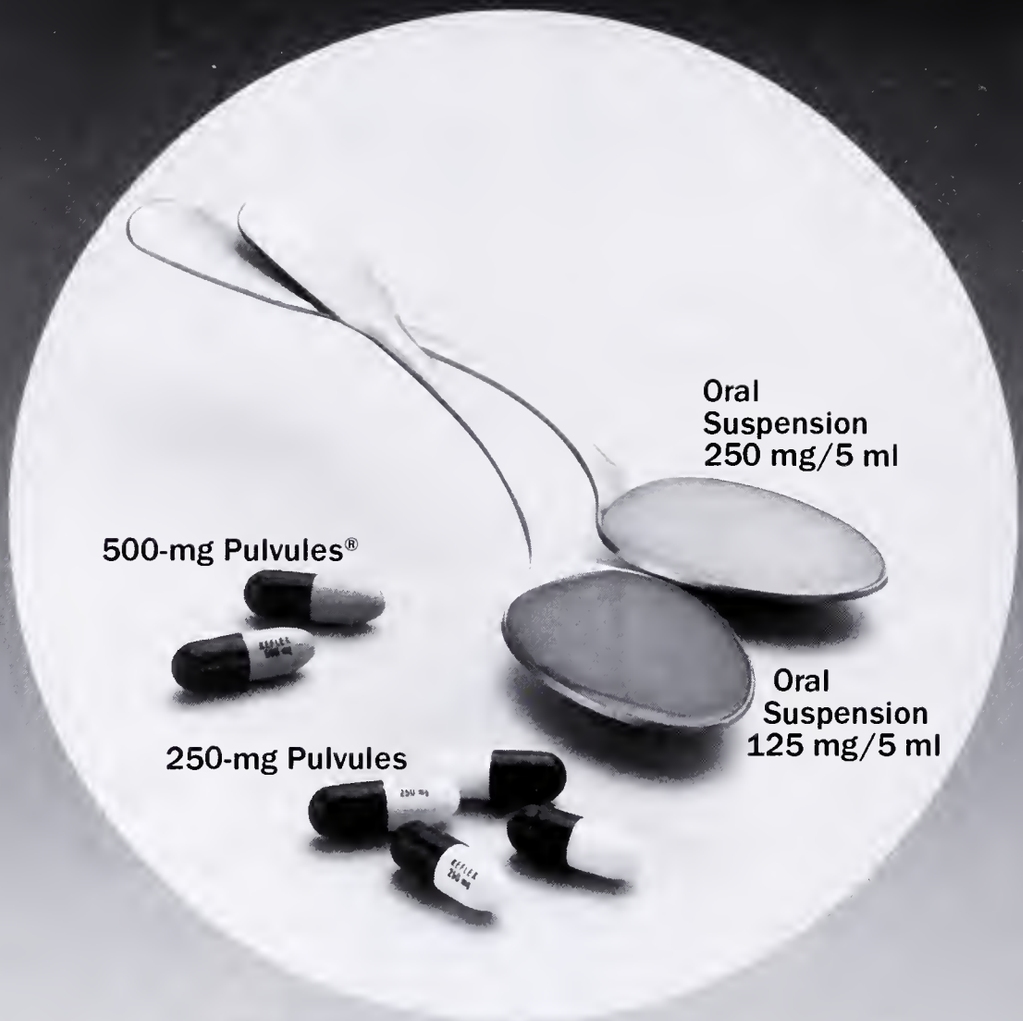
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HMA Auxiliary

36th Annual Session

At the 1984 annual session held December 6, 1984, at the Kahala Hilton, the new officers for the 1985 HMA Auxiliary were installed. They include the following: President **Lila Johnson** (Elmer); Vice Presidents for Administration **Sandy Dioso** (Marconi) and **Gwen Fu** (Denis); Vice President for Historical Matters **Joyce Chuang** (Katok); Vice President for Secretarial Matters **Kathy Oldfather** (Timothy); and Vice President for Finance **Emily Callan** (John).

Participating in the installation were National AMA Auxiliary President Billie Brady and National AMA Auxiliary Executive Director Hazel J. Lewis.

A special tribute in the form of a resolution was made to past AMA Auxiliary President **Betty Liljestrand** (Howard) from Hawaii.

1985 Health Project Focus

In support of the AMA Auxiliary's nationwide "Shape Up for Life" campaign, the HMA Auxiliary voted at its annual session to emphasize prenatal and postnatal care as its 1985 focus. The Auxiliary is promoting projects and programs in the county auxiliaries in five major areas of concern: (1) adolescent pregnancy; (2) fetal alcohol syndrome; (3) nutrition and pregnancy; (4) smoking and pregnancy; and (5) infant auto safety restraints.

HMA Auxiliary Featured in National Publication

In the January 1985 issue of Facets, the AMA Auxiliary's national magazine that has a circulation of 80,000, the auxiliaries on Oahu, Hawaii, and Maui were featured for their efforts in fighting drunk driving in Hawaii. Noteworthy was the establishment of Mothers Against Drunk Driving (MADD) chapters by these three auxiliaries with the leaders of each being former county Auxiliary presidents: **Carol McNamee** (Philip), Honolulu; **Betty Ghosh** (Manas), Hawaii; and **Leanna Stodd** (Russell), Maui.

Dual Billing

Beginning in 1985, AMA Auxiliary membership has been included on the HMA Statement of Dues as an optional line item. HMAA members have been encouraging their physician spouses to note this new inclusion for national membership recruitment.

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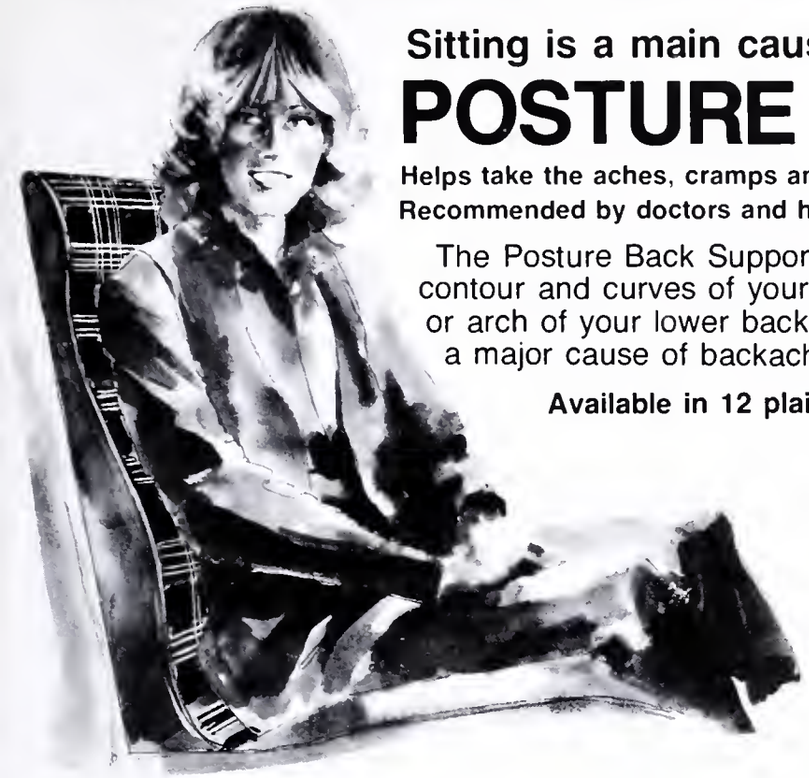
Continuing Medical Education

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

March 23-30, 1985	Vascular Surgery, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Lahaina, Maui.
March 25-29, 1985	*OB/GYN Update 1985, co-sponsored with the University of Washington School of Medicine, c/o Dee Chang, Continuing Medical Education, University of Hawaii School of Medicine, 1960 East-West Road, Honolulu, Hawaii 96826, (808) 948-6949. Location: Kauai.
March 30-April 6, 1985	Neurology Update, University of Washington School of Medicine, Division of CME, E303 Health Sciences Center, SC-50, Seattle, Wash. 98195, (206) 543-1050. Location: Royal Lahaina, Maui.
April 5-22, 1985	*Dialogues in OB/GYN with Dr. Abe Mickal, University of Alaska, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, c/o Dee Chang, (808) 948-6949. Location: 16-day tour of China.
April 6-12, 1985	Australian and American Psychosomatic Obstetrics and Gynecology Combined Meeting, Dr. Lorraine Dennerstein, Department of Psychiatry, Austin Hospital, Heidelberg, Victoria 3084 Australia, or Dr. David Young, 131 Chadwick Street, Portland, Maine 04102. Location: Hotel Inter-Continental Maui.

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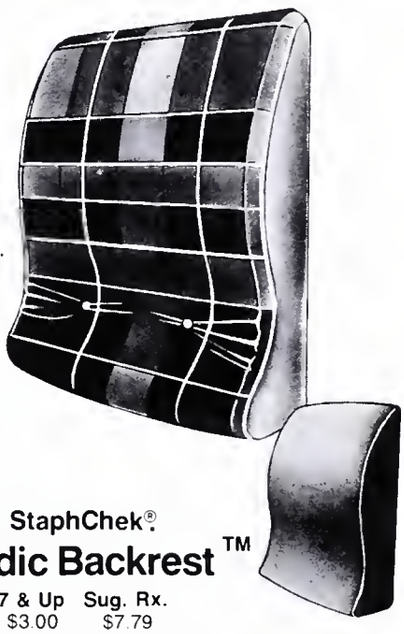
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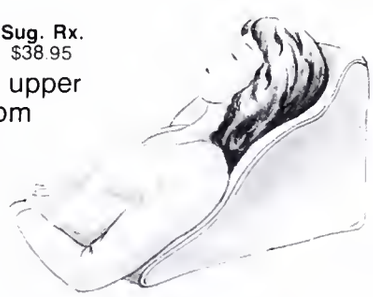
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Thirty mg of vinblastine were added to 5 units of ABO Rh compatible platelets and the mixture incubated for 1 hour at 37° in the dark. The platelets were packed by centrifugation at 4000 rpm for 3 minutes and the supernatant plasma removed and platelets re-suspended in 100 cc of donor plasma (over 2 hours at room temperature), then infused through a platelet filter over 15-30 minutes. The platelet bag and i.v. infusion tube were covered with aluminum foil. The estimated amount of vinblastine infused was 1 mg.

Results

Forty-two courses of vinblastine-treated platelets (VBL-platelets) were given to 34 patients with thrombocytopenia of varying etiologies between the ages of 11-81 (Table 1). Three complete remissions, 26 partial remissions and 10 failures were observed (Table 2). The results by disease categories are tabulated in Table 3. In the patient with idiopathic thrombocytopenic purpura (ITP) who failed with splenectomy, complete remission occurred after VBL-platelets were given. In 8 unsplenectomized patients with ITP, significant platelet elevations occurred. In the drug-immune thrombocytopenias, complete remission occurred in 3 and partial remissions in 13 patients. A 63-year-old male with cirrhosis, splenomegaly and hypersplenism and on cimitidine, spironolactone and furosemide, VBL-platelet infusion resulted in rapid rise in platelet count from 14,000 to 88,000 during a 7-day period and eventually to 100,000 by the 23rd day.

In both the ITP and drug thrombocytopenias, platelet elevations occurred, lasting from 12 to 42 days, with an average of 23 days. A 4- to 5-day lag was observed before rapid platelet increases occurred after the VBL-platelets were given. Second and third courses of VBL-platelets infusions still produced platelet elevations. Several patients who were given vincristine 2 mg i.v. with or without response, all responded to subsequent VBL-platelet infusions. Where platelet responses were seen to VBL-platelet infusion, the platelet count returned to near normal, normal or higher than normal levels (as high as 490,000). In general higher platelet elevations were seen with VBL-platelets than with vincristine. VBL-platelets given a few days following a preceding vincristine i.v. administration resulted in higher platelet levels than either drug given alone. In one patient with drug thrombocytopenia given vincristine 2 mg i.v. followed by VBL-platelets 3 days later, there resulted a platelet count increase from 22,000 to 145,000 after 15 days, a second course of VBL-platelets given inadvertently resulted in a further increase in platelet count to 310,000. Two patients with ITP, given VBL-platelets and other immunosuppressive agents (cyclophosphamide, vincristine, colchicine) and steroids, recovered completely without need for splenectomy. In patients with thrombocytopenia due to aplastic anemia, leukemia and hepatitis, neither vincristine or VBL-platelets were effective.

Side effects from the vinblastine-treated platelets were minimal and included minor febrile, chilly reactions, minimal hair loss, jaw pain. Transient hypotension occurred in an 81-year-old women, necessitating 24-hour hospitalization.

Discussion

Vinblastine-treated platelets appear to be useful and effective in the immune thrombocytopenias such as idiopathatic thrombocytopenic purpura, drug and collagen disease immune thrombocytopenias, and to have little or no value in the amegakaryocytic thrombocytopenias such as in aplastic anemia, leukemia, hepatitis. In this study, in idiopathic thombocytopenic purpura complete remission was seen in 1/8 of the patients. Review of the literature on the use of vinblastine-treated platelets in idiopathic thrombocytopenic purpura[2,3] and including patients from this study reveals complete remissions in idiopathic thrombocytopenic purpura (ITP) in 7/35 of the patients (20%), and partial remissions in 16/35 of the patients (42%).

*Professor of Medicine, University of Hawaii School of Medicine. (Presented at the American College of Physicians Regional Meeting, Honolulu, Hawaii, Jan. 6, 1983)

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TABLE 1. Clinical Patients Treated with Vinblastine-treated Platelets

42 courses of VBL-treated platelets given 34 patients with thrombocytopenia Ages 11-81

	Pts
ITP	9
Drug induced	11
Drug induced + cirrhosis	1
Drug induced + cirrhosis + hepatoma	1
L.E.	3
Aplastic anemia	5
Chronic myeloid leukemia	2
Acute myeloid leukemia	1
Hepatitis	1

TABLE 2. Use of Vinblastine-treated Platelets in Thrombocytopenia

Results	No. of courses (42)
Complete remission	4
Partial remission	26
Failure	10
Non-evaluable	2

Vinblastine-treated platelets in this study were most useful in drug-immune thrombocytopenia, where complete remissions were seen in 3 patients and partial remissions in 11 courses given to 8 patients.[4] Partial remissions were also observed in 2 patients with L.E. immune thrombocytopenia.

In one patient with cirrhosis, splenomegaly and hypersplenism and on drug medications, the dramatic platelet improvement after infusion of VBL-platelets resulted not only from amelioration of the drug thrombocytopenia but possibly also from lessening of the hypersplenism (medical chemical splenectomy). Further trial of VBl-platelets in thrombocytopenia due to hypersplenism is suggested.

TABLE 3. Use of VBL-treated Platelets in Thrombocytopenia

	Pts (34)	Results: Complete remission	Partial remission	Failure
ITP	8	1	8	1
Drug induced	7	3	11	
Drug + cirrhosis	1		1	
Drug + cirrhosis + hepatoma	1		2	1
L.E.	3		2	
Aplastic anemia	5			5
Acute & chronic leukemia	3			3
Hepatitis	1			1

Vinblastine-treated platelets appear to be useful in a variety of thrombocytopenias.[5]

Summary

Clinical uses for vinblastine-treated platelets appear to be in the following:

1. Drug-induced immune thrombocytopenia, refractory, persistent and unresponsive to medical management.
2. Immune thrombocytopenia due to collagen disease.
3. Failure of splenectomy in ITP.
4. When splenectomy is contraindicated or refused in ITP.
5. May be of value in thrombocytopenia due to hypersplenism.
6. No value in thrombocytopenia due to decreased marrow production (aplastic anemia, leukemia).

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In Memoriam

Ted Tomita, our "man for all seasons," died February 17, 1985, at age 67. Funeral services were held February 23 at Nuuanu Memorial.

Dear Pearl,

Do not grieve, because Ted is finally at rest and suffers no more. How long has it been? Seems eons ago that Ted returned from Michigan after multiple surgeries on his neck, still in pain and a shadow of his former self. How we all suffered to see him that way. And how agonizing it must have been for him to retire; yet he continued to teach, even though crippled, and still able to inspire his medical students (our daughter was one of his students).

Let us remember Ted as he was, as Herb Chinn described him in his eulogy: "Ted was a man with a keen mind and vision way ahead of his time." (Herb used to say that if the medical society had only adopted Ted's plans for the Kukui project, we would now have an HMA office in the heart of town and the members might not be paying membership dues.) Ted was a born teacher and leader. Despite his busy practice in Waipahu, he still found time to serve at one time or another on every important medical committee. He was president of HCMS in 1962; president of HMA in 1966; and the Robbins Award recipient in 1967. He was assistant clinical professor of the fledgling John A. Burns School of Medicine. He was chief of staff at SFH in 1956 and a Kuakini board member from 1961-69. Herb's voice cracked as he bid farewell: "To an old friend of 30 years: Aloha, Ted."

Pearl, remember what Bob Sato said: "One word that best described Ted is 'dedication.' He was an amazing man who found the time and energy to devote to both professional and community affairs. He left a legacy of accomplishment which will long be remembered by all of us. It is sad to lose a husband, a father, and a truly good friend."

And Pearl, let us remember these words by Rev. Nagao: "Life passes swiftly . . . like winds of impermanence which blow the white ashes — the lily white ashes — showing us how fragile is the nature of human life. Whether young or old, we must understand the nature of death . . . and live with the *nembutsu* in our homes. Then we can understand the transiency of life — that it is part of the eternal life — the concept of 'one-ness.' Ted now perceives the blessings of eternal peace . . . the path of Nirvana."

Henry Yokoyama, M.D.

Parathyroid Carcinoma:

A Case Report and Review

George O. McPheeters, M.D.*
and Catherine A. Bender, M.D., Honolulu**

• *Parathyroid carcinoma, though rare, is a distinct clinical and pathological entity. The diagnosis often depends upon a high index of suspicion. Markedly elevated serum calcium in a patient with a palpable neck mass and an adherent tumor at operation should undergo careful en bloc resection. Pathologic confirmation of the diagnosis rests upon capsular invasion, mitotic figures and fibrous trabeculae. Resection of local recurrences and metastases will often afford lengthy palliation.*

Case Report

A 31-year-old Japanese man developed malaise, nausea and weight-loss in 1978 and was evaluated in another state. Serum calcium was elevated at 14 mg% and a markedly elevated serum parathyroid hormone level was documented. He underwent neck exploration. The left superior parathyroid gland was enlarged and densely adherent to the thyroid. A total thyroidectomy and left upper parathyroidectomy were carried out. Pathologic examination of the specimen showed the tumor to measure 2.6 x 0.9 cm. It consisted of nests of plump cells with pale, eosinophilic, granular cytoplasm (Fig. 1). The nuclei were hyperchromatic or vesicular with clumped chromatin. Occasional mitotic figures were seen. Islands of these cells were infiltrating adjacent thyroid tissue (Fig. 2). Nests of cells were divided by prominent fibrous septae. A diagnosis of parathyroid carcinoma was made. Postoperatively, the patient became normocalcemic and remained so for one year.

Recurrent hypercalcemia resulted in reexploration of the neck and resection of one metastatic lymph node. Normocalcemia ensued again but was transient. The recurrent hypercalcemia was treated with external beam radiation to the neck (5000 rads). In 1983, the patient came to Hawaii and was evaluated for nephrolithiasis and hypertension. Serum calcium was 11.8 and his PTH was 511. CT scan of the neck and chest as well as liver, spleen and Gallium scanning were normal. Cervical arteriography was unremarkable. The serum PTH rose to 800 and the patient underwent bilateral neck exploration with multiple biopsies negative for parathyroid tissue. He was subsequently admitted for mediastinal exploration. Through a median sternotomy, a thymectomy and excision of a nodule in the lingula were performed. Histologically, the thymus was normal. The pulmonary nodule was well circumscribed and measured 1 cm in diameter. The histologic appearance was very similar to that of the original tumor (Fig. 3). The patient's calcium promptly dropped to 6.3 mg% and he was discharged on vitamin D and calcium supplements.

Discussion

Parathyroid carcinoma is a rare tumor. Its exact incidence is unknown, but it is believed to account for between 1 and 4% of all cases of primary hyperparathyroidism.[1,2,3,4] Between 8 and 25% of these carcinomas are nonfunctioning.[5,6,7] Carcinoma of the parathyroid occurs in all age groups but is most common in middle age.[2] Unlike benign parathyroid adenomas, males and females are affected equally.[1,6,8]

Functional tumors present with symptoms and signs of hypercalcemia. Bone disease is present in 60% of cases and nephrolithiasis in 30%.[2] A palpable neck mass is surprisingly common, being present in 31% of 61 cases reviewed by Castleman, and 61% of 39 hyperfunctioning tumors reviewed by Holmes.[2,6] Non-functioning tumors are even more frequently palpable because they come to medical attention later in their course.[6]

Parathyroid carcinoma has a marked propensity for local recurrence with 30 to 70% of patients returning with extranodal cervical disease.[2,5,6] The case reported here is typical of the majority of those recorded in the literature in regards to presentation, operative findings, local recurrence, late distant metastasis, and repeated cervical or mediastinal explorations.

The hypercalcemia associated with these tumors is often higher than the

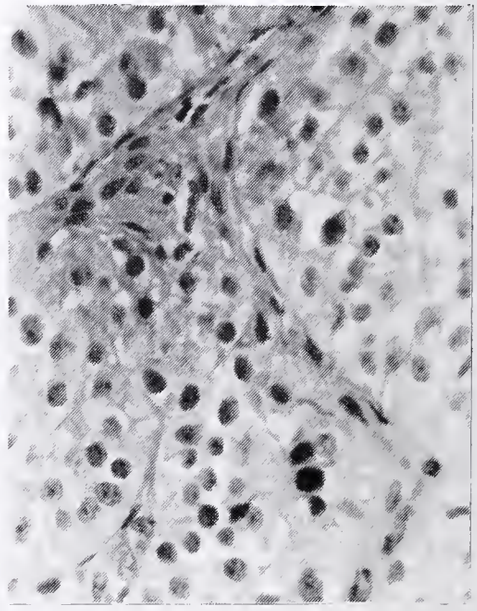


Fig. 1. Primary tumor. (250 x)

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**Department of Pathology, University of Hawaii

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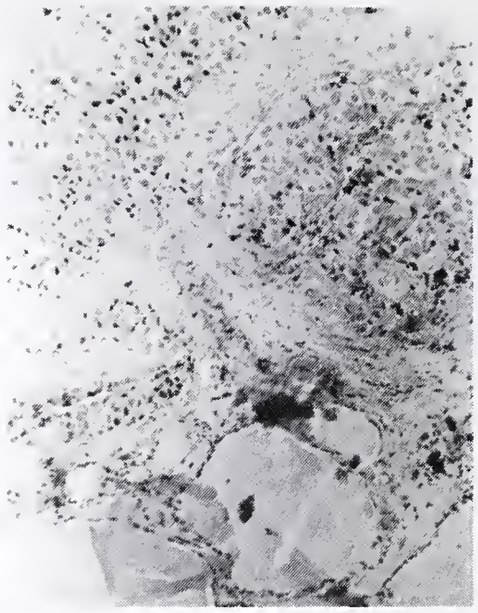


Fig. 2. Invasion of adjacent thyroid gland by tumor. (100 x)

elevations seen with adenomata or benign hyperplasia. About 75% of patients have a serum calcium of 14 mg% or greater.[6]

The presence of a fibrous, inflammatory reaction with adherence of the gland to surrounding structures is one of the criteria upon which the diagnosis of malignancy is made grossly.[9] The invasion of thyroid tissue by the tumor necessitated thyroidectomy in our patient.

Microscopically, the differentiation of benign parathyroid adenoma and carcinoma may be difficult. Benign lesions may contain atypical cells with hyperchromatic nuclei, and may even show invasion of blood vessels. Moreover, tumors with a very benign appearance may metastasize.[2,6,10,11] The presence of mitotic figures, thick fibrous bands throughout the tumor, a trabecular pattern and capsular or blood vessel invasion have been cited as impor-

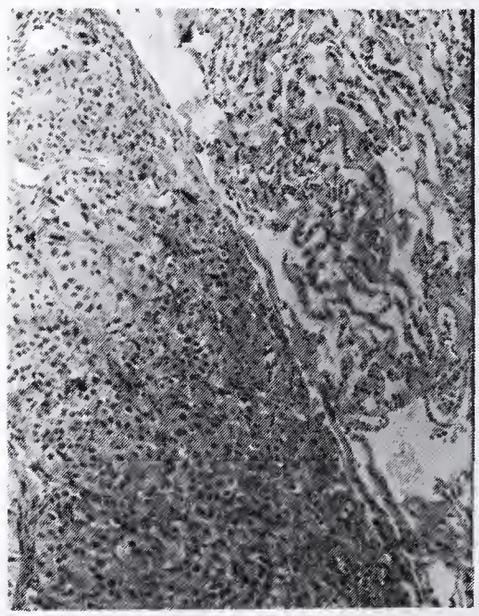


Fig. 3 Pulmonary metastasis. (100 x)

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tant characteristics of parathyroid malignancy.[2,12]

Even with metastatic disease, parathyroid cancer may be associated with lengthy survival. Excision of the primary tumor, a local recurrence or a metastasis is the only definitive therapy. An inadequate resection will lead to cervical recurrence and subsequent lymphatic and hematogenous dissemination if the diagnosis is missed at the initial operation. Aldinger has pointed to the importance of en bloc resection and careful technique to avoid rupture of the tumor capsule.[5]

The incidence of lymph node involvement is variable.[2,6] When there are no enlarged nodes, the efficacy of radical neck dissection is not established. Jarman has managed 7 patients by local excision alone and reported only one recurrence in a mean follow-up of 4 years.[13]

Radiation therapy has been employed in a number of reported cases without significant benefit.

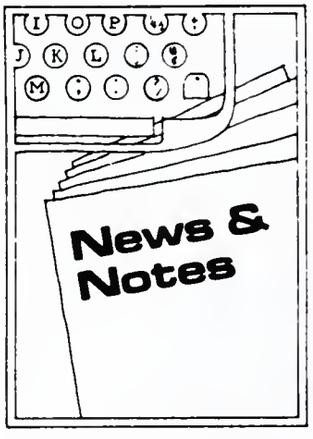
Serum calcium is a convenient marker for recurrence in the functional tumors and frequently rises before a metastasis or local recurrence is clinically identifiable. Aldinger recommends medical management of hypercalcemia until the disease can be localized, as "blind" neck exploration may fail to lower the serum calcium, even when venous PTH sampling has proven a cervical recurrence.[5] If hypercalcemia is refractory to medical therapy and no recurrent tumor can be identified, re-exploration must be considered. Pulmonary metastases may be resected with the expectation of lengthy palliation.[6,11,12]

Chronic medical therapy is difficult. Porcine calcitonin, estrogens, and mithramycin have been reported to be of some benefit, apparently blocking bone resorption.[13,14,15]

Five-year survival is 50%, but only 13% of patients survive 10 years.[6] The systemic effects of prolonged hypercalcemia, and not actual tumor burden, are responsible for the mortality.

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Elected, Appointed & Honored

We congratulate our new HMA officers: President **William H. Hindle;** President-elect **Russell Stodd;** Secretary **James Lumeng;** AMA Delegate **William Iaconetti;** Speaker of the House **Herbert Uemura;** Vice Speaker **Milton Howell;** Councillors **Peter Kim, Donna McCleary, Robert Harrison, Douglas Bell II, Paul DeMare, Martha Hefley,** and **Myron Shirasu.** Our heart-felt thanks to **Sakae Uehara,** outgoing president, for a job well done.

Ann Catts was named Physician of the Year at the HMA annual meeting. Ann was the first woman president of the HCMS and the HMA, and was honored for her outstanding service to the community, particularly in educating the public about breast cancer.

Our kudos also to the new HCMS officers: President **Allan Kunimoto;** President-elect **Philip McNamee;** Secretary John McDonnell; Treasurer **Ron Peroff;** Board of Censors **James Lumeng.** Again our sincere thanks to **James Lumeng,** outgoing HCMS president, for all his contributions.

George Mills, our favorite Alii and Medical Director of Kam School, received the American Medical Association Dr. Benjamin Rush Award for outstanding citizenship and public service at the 1984 Interim Meeting of the AMA House of Delegates at the Sheraton-Waikiki. George was Hawaii's delegate and alternate to the AMA, serving on the Council on Legislation, Board of Trustees, and Judicial Council. As Pat Hunter said, "George Mills is no stranger to awards — he's received plenty of them locally."

Hawaii Ophthalmological Society President **Malcolm Ing,** Vice President **Shigemi Sugiki,** Secretary **George Plechaty,** Treasurer **John Drouilhet,** and Member-at-Large **Gilbert Yamamoto** were elected to office.

Kenneth Haling of Kahului was recertified as a diplomate of the American Board of Family Practice.

Life in These Parts

Everyone agrees that pot-growing in the Islands should be stopped, but the problem is how? Residents met with U.S. Drug Enforcement officials and voiced their concern about the use of potent herbicides such as Paraquat, which could turn Hawaii's mountains and hiking trails into a danger zone. The residents suggested using sea water, dyes, diesel oil, etc. **Steven Moser,** president of the Maui County Medical Society, said the dangers of Paraquat far outweigh its benefits in battling pot-growers. "Paraquat poisoning is untreatable. It's basically a terrible way to die."

Russell Hicks, internist with a special interest in adolescent medicine, warns that the emotional growth of adolescents who smoke pot regularly is often stunted. Russell feels that the threat of developing physical problems such as interference with ovulation, sperm production, impaired lung function, and possible cardiac problems have not scared marijuana smokers; so he feels that peer pressure may be the deciding factor.

David McEwan of the Honolulu Medical Group is one of the founders of Life Foundation, a local organization to provide assistance to AIDS victims and to provide education for people in high-risk groups. The total number of AIDS cases in Hawaii has reached 24, with 12 fa-

talities. Donald Abrams, assistant director of the AIDS Clinic at San Francisco General Hospital, reports that 98 percent of the 781 AIDS cases in San Francisco have been gay men. He feels that AIDS eventually would spread to the general population. Of the more than 7,000 cases identified nationwide, 71 percent have been gay men and 17 percent drug users by injection. David says: "We are still convinced that the only ways it can be contracted are through sexual contact and from contaminated blood in transfusions. One of the real tragedies in all this is that AIDS can be prevented by following some simple precautionary measures, especially during sexual activities."

When Molokai General Hospital required its physicians to carry malpractice insurance if they delivered babies there, which would have cost the Molokai Clinic Group more than $80,000 a year, the physicians stopped delivering babies. The expectant mothers will have to make arrangements to give birth off-Island. **Emmett Aluli,** of the group, estimated that they only deliver 60 babies a year, which is not enough to cover the group's insurance premium.

Stanley Snodgrass, president of the Hospital Association of Hawaii, feels that if the Medicare Freeze Plan is adopted, some Hawaii hospitals may be forced out of business.

James Lumeng, St. Francis Hospital pathologist, says "the Medicare proposal will create a lot of hardship for the increasing numbers of aged in our population. Such drastic measures need not be taken, because current efforts to hold down costs in the medical field are working. To cut costs, hospitals will have to lay off staff, because about 60 percent of those expenses is in payroll. It is naive to think that implementing the freeze will not affect the quality of care."

HMA President **William Hindle** said: "Nobody knows for sure what the effect will be. Hospitals in Hawaii already have made enormous strides in cutting costs, and that has not had a detrimental effect on patient care. Doctors really are one of the lesser portions of the Medicare payment system. If the government really wants to influence the total cost, I think the efforts should be directed at where the greatest spending occurs. The greatest amount of Medicare funds goes to long-term care facilities and nursing homes. Hospitals are No. 2 on the list."

Hing Hua Chun, chairman of the HMA Medicaid/Medicare Committee, does not think patient-care will deteriorate. But, he believes physicians are being asked to take on an inordinate share of the burden of the government's efforts to save money. "We are being singled out," says Hunky. "Lawyers and most other professionals don't have their fees regulated."

The state plans to revamp its Medicare and Medicaid reimbursement policies for nursing-home patients. The proposed rules are likely to kill plans for two nursing-homes in the Windward Oahua area: A 120-bed facility by Aloha Health Care, Inc., of Tennessee, and a 135-bed facility by Joseph Giannasio and partners above the new Castle Hills subdivision off Likelike Highway.

"Then there's cosmetic surgeon **Bruce Chrisman,** who usually does his sculpting on the human form. However, artist Ramsay talked him into putting together some 40 artworks in other media for a one-man show at Ramsay's Downtown Gallery." (from Dave Donnelly's Hawaii)

"The Rev. Abraham Akaka stopped in the middle of his blessing of Ruth Rittmeister and Mary Moyes' new travel agency, A Touch of Class, for a touching moment when he recognized Mrs. Niall Scully in the crowd 'Fifteen years ago, your husband removed an ugly thing (cancer) from my lung. Please thank the doctor again for me,' Rev. Akaka said, and then went on with the blessing." (from Don Chapman's Life Style)

The Hawaii Kai Emergency & Family Medicine clinic received SHPDA clearance, without going through the lengthy Certificate of Need approval process, from administrator Henry Thompson, simply by changing its name to Hawaii Kai Family & Emergency Medicine, in spite of recommendations from Mayor Anderson and the chief of the SHPDA regulatory branch not to approve the exemption, because of the word "emergency" in the clinic's title. A week later, a Hawaii Kai resident called the Sun Press to complain that her 25-year-old son was turned down for treatment of stomach pains at the clinic because he had no insurance or cash. **George Seberg,** one of the clinic physicians, explained that the clinic would accept the victim of a life-threatening emergency regardless of the patient's ability to pay, but that stomach pains did not constitute such an acute emergency. (Hence the issue re the word "emergency.")

Plastic surgeon **James Penoff** explains in The News/Zone 3 September issue that collagen injections, widely publicized cure for wrinkles, have no permanent effect and that the wrinkles return in anywhere from 2 months to 2 years.

Medical Briefs (December)

TEL-MED had a new tape for children with Santa's message on how to have a healthy, safe, and merry Christmas. The Kaiser Permanente Medical Care Program offered a free conference: "How to Live Longer and Happier After 50." The Association for Fitness in Business sponsored a free lecture on "Exercise and Longevity — Fact or Fiction," by Ralph Paffenbarger Jr., Stanford School of Medicine epidemiologist. St. Francis Hospital held a workshop titled "Holiday Blues: Physical and Emotional Response to Normal Grief." Wahiawa General Hospital gave a class on "Healthy Holiday Desserts" by author Mary McDougall, co-author of "The McDougall Plan."

Physicians Speak Up

Maui neurologist **Lorne Direnfeld,** who did research on Parkinson's and Alzheimer's at Boston University Medical Center and Boston VA Hospital before moving here in 1983 under an NIH grant, says that of the Parkinson's patients studied while equally divided between disease primarily of the right brain and of the left brain, those with Parkinson's of the left side scored more poorly in intellectual tests than those with disease of the right side. The reserachers found that two brain chemicals in the right-sided Parkinson's patients were present at higher levels than in the left-sided patients. Lorne feels that the function of attention which underlies all intellectual activity is perhaps located in the right brain.

Thomas Burch, acting deputy director of DOH, wrote: "I certainly endorse and commend the efforts of the Friends of Ronald McDonald House to establish such a house in Honolulu."

For the past two years, Jeffrey Isner of Tufts Medical School and the New England Medical Center has been working on a catheter-laser system focused by fiberoptics to vaporize coronary blockages using Argon and Nd:YAG lasers.

Members of the AMA House of Delegates meeting in Honolulu expressed concern about the dangers of chelation therapy (using EDTA) for cardiovascular disease, rheumatoid arthritis, cancer, Alzheimer's, kidney stones, and other disorders. EDTA (ethylene diamine tetraacetic acid) is supposed to remove calcium from coronary plaques. A course of treatment costs up to $4,000. Hundreds of thousands of patients are lining up in waiting rooms of clinics to get their IV doses of EDTA. AMA President Joseph Boyle put it more bluntly: "It's quackery."

The AMA House of Delegates meeting in Waikiki proposed stronger opposition to boxing at all levels. AMA President Joseph Boyle hit Medicare cutbacks and charged that federal efforts to impose Medicare budget restrictions are callous and cynical actions that are not saving money for the elderly and disabled. He also feels that we should work at reversing an erosion of public confidence in physicians. Less than three of 10 people believe physicians charge reasonable fees. Two of 10 think physicians are trying to hold down costs; four of 10 feel that physicians act as though they are better than other people and the same low numbers feel we spend enough time with

them. Boyle also feels that major scientific achievements (e.g. Barney Clark, William Schroeder, and Baby Fae) reported to the public are too often premature or blown out of proportion.

Ten residents out of the 100 or so Hansen's disease patients who were living at Kalaupapa died the past year. The Board of Health, advisory body to the state DOH, listened to testimony on the program for weeks. The Big Island's **Kevin Kunz** described the medical care available to these patients as suboptimal. He advocates continuity, caring, and counterbalance in the program. **Oliver Hasselblad,** medical administrator at Kalaupapa, feels the health care for residents is adequate and that patients can be flown to Honolulu in emergency situations. **Olaf Skinsnes,** who has researched Hansen's disease for more than 30 years, feels there is lack of adequate outpatient facilities. The board will sift through the information and testimony and advise Health Director Leslie Matsubara on policies relating to Hansen's disease.

Oncology Conference

A 72-year-old Japanese woman in for a routine check-up was discovered to have a recent onset of iron deficiency anemia and positive stool occult blood. Three months earlier she had had GI complaints and had a BE, which was negative. Workup included a UGI and a repeat BE, which were both negative. A colonoscopy revealed a right colon lesion.

Pathologist **Grant Stemmerman** asked: "Was she obese? Did she have gall bladder disease?" Moderator **Glenn Kokame** asked: "Why do you ask these questions?" Stemmy: "Tell you later." Radiologist **David Sakuda** who had done the BE admitted: "In retrospect, I must have been blind. It's an embarrassing case. I did the BE the day before the colonoscopy." **Kevin Loh** pursued the issue: "What percent do you radiologists miss in retrospect? I hear 15 to 20%." David: "Depends on the radiologist. I hear 20% are missed, but I guess 10 to 15% are ball park figures." David studied the films: "Here's the problem. This overlapping in the cecal area . . . See this line? (We saw nothing/Hy) That's the lesion." Kevin continued with the history: "Endoscopic biopsy showed adenoCA. She had a right colectomy done, stayed 7 or 10 days, and went home." Glenn asked, "Was the CEA elevated?" "No, it was normal."

Stemmy elaborated on his earlier inquiry by drawing a graph showing male vs. female ratio of polyps: "Women have 30% incidence of polyps in the cecum which drop to 10% in the rectum while men have 10% polyps in the cecum and 30% in the rectum. Low fat, low caloric diets are associated with rt sided lesions. Large bowel CA occurs in persons with high risk for breast CA. Obese women with breast CA have a higher risk for colon CA, but only 1/3 are estrogen binders." Kevin added: "We've tried Tomoxifen on colon CA, with negative results. When we pick up colon CA with stool Guaic, it is early CA. Stool Guaic is a good screening method for colorectal CA. Proctosigmoidoscopy is no longer recommended as a screening procedure, but I think annual colonoscopies are indicated for follow-up rather than BE every 6 months."

Stemmy: "I think hemoccult and Hb studies are more productive than annual colonoscopies." Glenn queried: "Is it true that 20% of colon CA is in the distal 20 cm? Gary Glober is pushing flexible sigmoidoscopy courses for primary physicians at the Cancer Center."

Alvin Furuike presented the case of a 71-year-old Japanese man with chronic emphysema who had a recent bout of Rt scapular and Rt anterior chest pain. A chest film showed an RUL mass with emphysema. Washings and biopsies were negative. A skinny needle aspiration of the mass revealed epidermoid CA. Pathologist **Larry McCarthy** showed a slide of the aspirate and said: "It looks to be consistent with poorly differentiated epidermoid CA." Oncologist **Kevin Loh** asked: "How can you say epidermoid CA?" **Grant Stemmerman** defended Larry: "He said 'consistent' with epidermoid CA. We cannot say definitely with a skinny needle biopsy. We need more tissue to make a definitive diagnosis." Kevin: "We are using therapeutic protocols for specific cell types so we need to know. MD Anderson studies compared CT scans with Gallium scans for staging mediastinal lesions. Gallium scans did not improve the picture over CT scans. Practically speaking, for someone with pulmonary function studies this bad, he should have high-dose radiation. Squamous cell CAs do well." Al continued: "All his pulmonary function tests were poor. The standard test for pulmonary function is to walk up the stairs with the surgeon. If the surgeon beats the patient, then the latter is a pretty bad risk."

Moderator Glenn Kokame: "I saw this patient and I'm the surgeon who walked up the stairs with him. He barely made it up 2 flights. Generally, if the patient can walk up 2 flights he can endure a lobectomy. Three flights and he can have a pneumonectomy. His FEV was 0.74 L (normal is greater than 2 L) and his MVV was 24 L/min (50-60 L/min is qustionable for a thoracotomy). So thoracotomy was out. Mayo studies recommend radiation with CAD, BCAD, NAP, and DAP."

Miscellany

Kaiser internist **Craig Nakatsuka** had to make a house call on a woman with abdominal pain. Craig grabbed the hospital emergency kit and took off. He was met by her husband who showed him the bedroom where she was writhing uncomfortably. He closed the door while the husband waited in the living room. Moments later, the door opened and Craig asked, "Can I have a chisel?" The husband ran down to his basement workshop for a wood chisel. The door closed again. Minutes later, the door opened and Craig asked for a hammer. Again the husband rushed down for a hammer. The door closed and the husband eould hear a lot of activity behind the closed door. Again the door opened and Craig asked, "Can I have a hacksaw?" The husband was beside himself, "Doctor, what's wrong with my wife?" Craig reassured him, "I don't know yet. I can't get the emergency kit lock open."

Claire Loo, MSD rep, had once done research on sheep for a college course and learned that they were truly docile dumb creatures, and that's why they needed shepherds to watch over them. Claire cooed to Craig one day: "Did you know that sheep were that dumb?" Replied Craig, "Yes, my li'l lamb."

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CONTENTS

Editorial: The Contingency Fee 119
J.I.F. Reppun, M.D.

Letters to the Editor 119
Re: Marijuana Update
Russell T. Stodd, M.D.
Steven M. Moser, M.D.

Continuing Medical Education 122

Psychological Therapies for Chronic Pain 124
William T. Tsushima, Ph.D.

Hemolytic Anemia: Experience in a Community Hospital 129
Francis H. Fukunaga, M.D.

Over the Editor's Desk 130
J.I.F. Reppun, M.D.

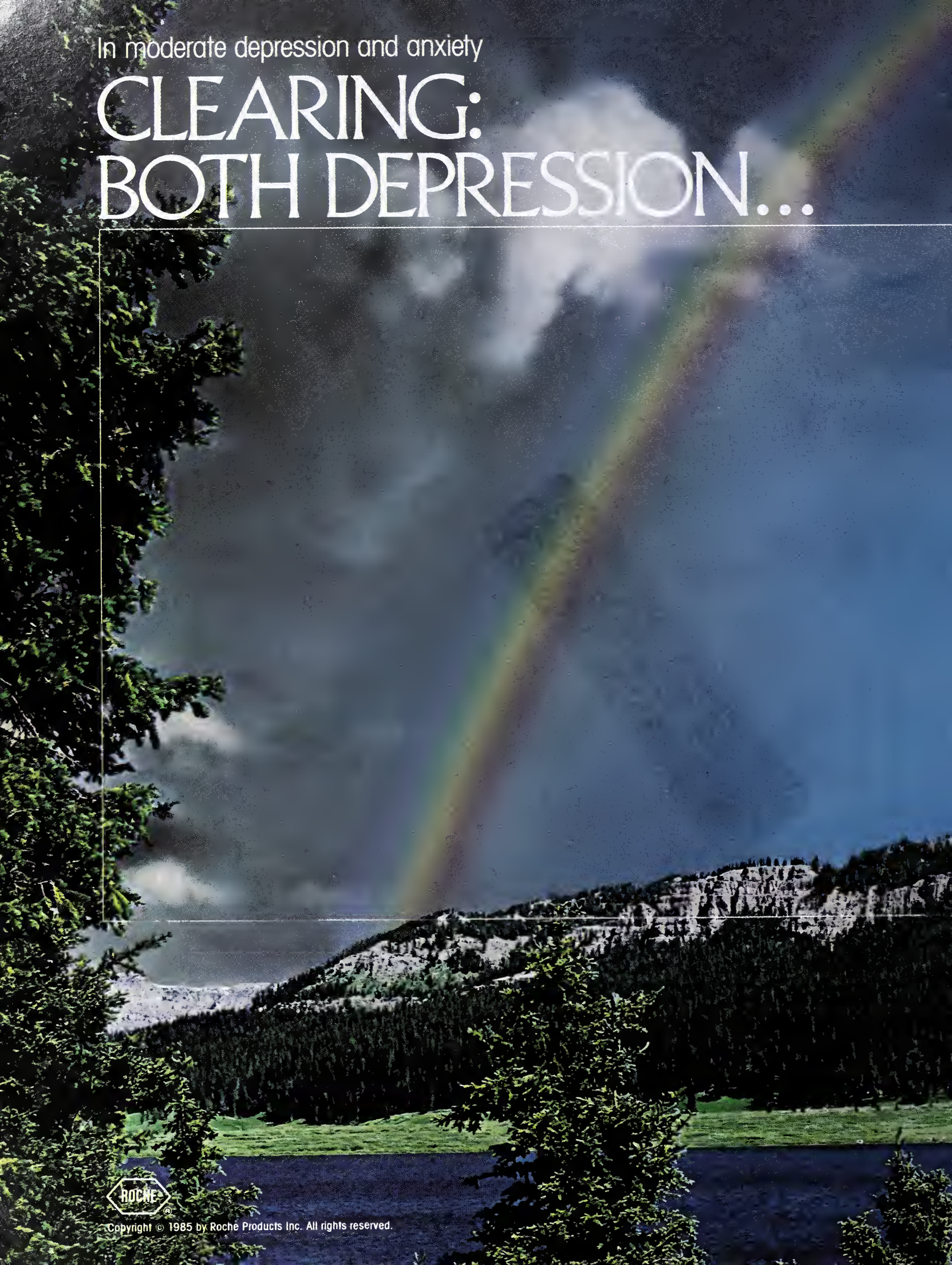
Evaluation of Selected Aspects of the Oahu EMS Program 135
Roy G. Smith, M.D., M.P.H.; Michael N. Dennis, B.A., M.A.; Jerry N. Johnson, Ph.D.; Ray S. Yamaoka, B.A., M.A.; J.K. Sims, M.D.

News and Notes 144
Henry Yokoyama, M.D.

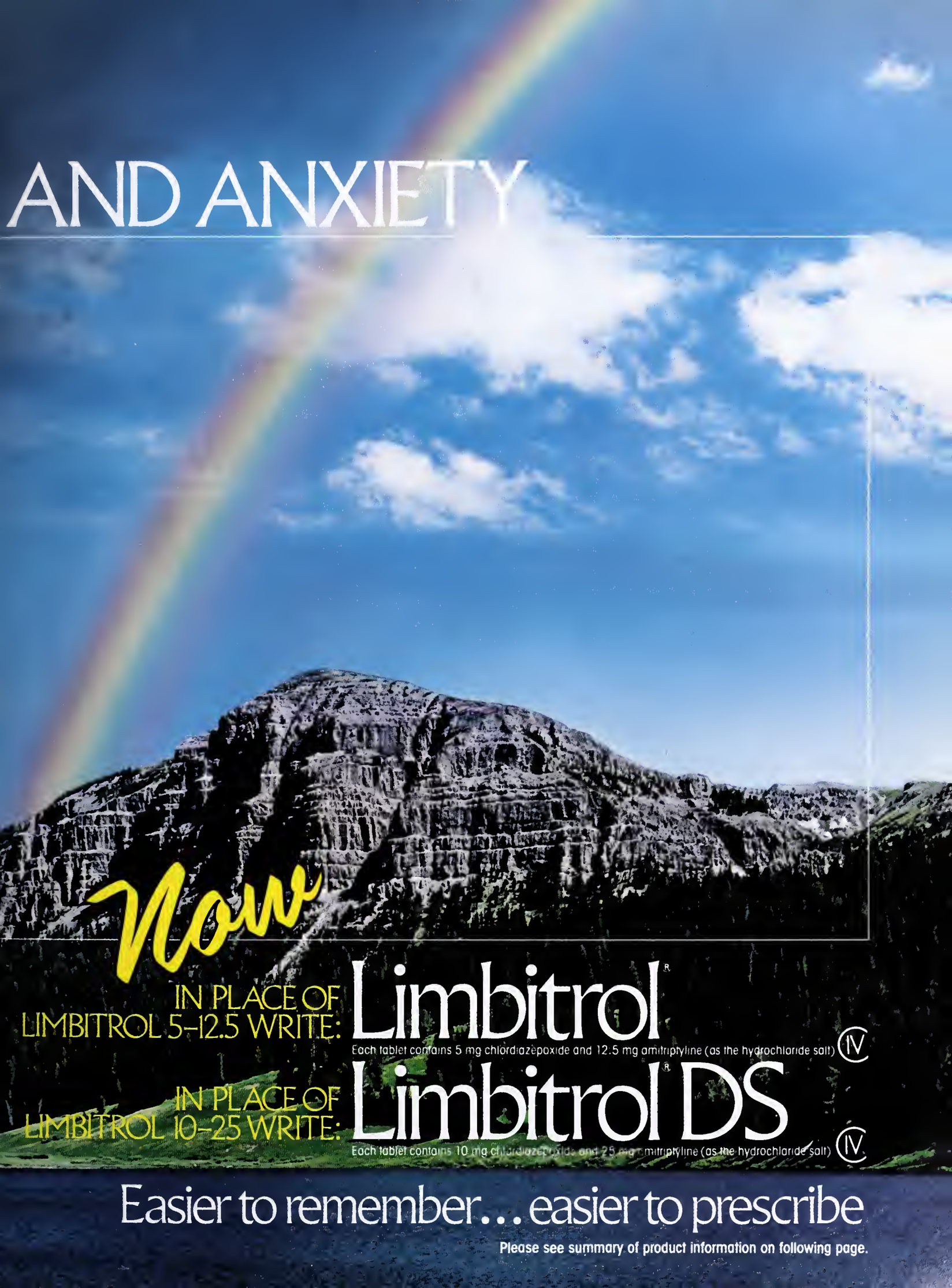
Capsule of HMA February Council Meeting 150
J.I.F. Reppun, M.D.

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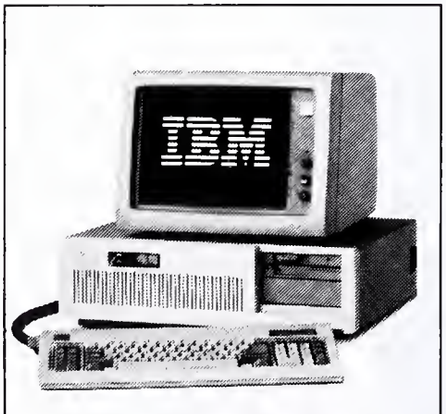
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The Contingency Fee

At a recent meeting of HMA's Medical Malpractice Law Committee (MMLC) there was a lively discussion with two plaintiffs' attorneys on the subject of tort reform (HMA is actively lobbying for reform in (a) periodic payments, (b) collateral source of payments, (c) the contingency fee, (d) awards for pain and suffering, (e) the statute of limitations in the case of minors, and (f) the joint and severability proviso currently a part of the statute).

This committee is an unusually large one, but for good reason. We count 36 M.D.s and J.D.s plus Kathy Lipp, a member of the HMA's Auxiliary who is also the executive director of the Hawaii Federation of Doctors and Dentists. The chairman is Ken Hughes M.D., M.P.H., J.D., well-qualified to lead, if only on the basis of his impressive suffixes. The staff person is Ella Kawamoto.

The number and mix of members of MMLC has been determined by the chairman in an attempt to obtain as much interprofessional communications and understanding as possible in addressing so difficult and complex an issue as how to mold Hawaii's current malpractice law in order for it to provide justice and compensation to the victim of a medical tort, and at the same time make it possible for physicians to protect themselves when practicing modern, high-risk medicine, surgery, and obstetrics.

Everyone is aware that the problem lies with escalating insurance premiums that carriers must demand in order to cover the increasingly high dollar awards, to cover the costs of legal suits and defenses and to cover the out-of-court settlements, which are the more common way of resolving these suits. Incidentally, we are told that justice is better served and at less cost to both plaintiff and defendant by these mutually agreeable out-of-court settlements, which are the most common way of resolving these suits. Incidentally, we are told that justice is better served and at less cost to both plaintiff and defendant by these mutually agreeable out-of-court negotiations than by the acrimonious adversary system practiced before the Bar.

The particulars of the discussion in committee reported here pertain to the contingency fee.

Many physicians feel that everything would turn out rosy—that is, for the doctor—if a lawyer is prevented from taking a case in hopes of getting a windfall, if he won either in court or by getting a generous out-of-court settlement (but taking a gamble and winning nothing, if he lost). The doctors generally feel that plaintiffs' attorneys are indeed "solicitors"—soliciting business and clients by sniffing out every possible medical malpractice suit and then assuring his client that it will cost him nothing out front. In England, an attorney is often called a solicitor. Despite this primary meaning of the word in the dictionary—one who solicits gifts of money—the word more likely connotes being solicitous of the client's welfare!

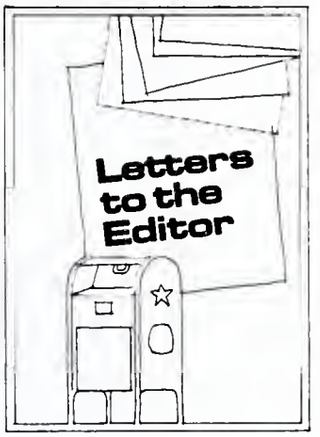
Plaintiffs' attorneys vigorously deny the former accusation, of course. The argument FOR the contingency fee most commonly given is that it offers the poor man an opportunity for redress, which he could otherwise not afford.

We learned that this is not so. We learned that the contingency fee system does not help the poor man; nor does it mean "ambulance-chasing!"

The facts are: a lawyer who is approached by a plaintiff to take his case of alleged medical tort first weighs very carefully the merits of the damage suit, because the attorney is well aware that it will cost him time, energy, effort, and dollars to even bring it to the Medical Claims Conciliation panel (MCCP) level, and much more to carry it on through the trial. Unless the attorney is very certain of the merits of the case and the chances of winning it, he is more than likely to turn it down. Therefore, the poor man is discouraged from purusing his claim, even though there may have been some degree of malpractice involved. A rich claimant, on the other hand, can afford to pay the lawyer whatever he charges and can insist that the suit be pursued.

The moral of this story: we physicians need to meet with the trial lawyers of both sides, in order to understand their views and contentions as advocates for and against the aggrieved patient, rather than castigating all plaintiffs' attorneys out of hand.

J.I.F. Reppun, M.D.



Re: Marijuana Update

Editor:

This is just a short note to thank Dr. Sprague for the excellent article which she prepared for the HAWAII MEDICAL JOURNAL, January 1985. As a parent, a physician, and a very concerned citizen, I feel indebted to her for the personal and professional detail which she so generously shared in helping us all to understand the dimension and seriousness of this very complex problem.

Let us hope she is aware that her individual sacrifice and struggle for human values is a testimony of truth and love, which moved me and many others too.

Russell T. Stodd, M.D.
Kahului, Maui

Editor:

Dr. Clare Sprague's article, "Marijuana Update," in the January 1985 issue of HAWAII MEDICAL JOURNAL is well written and lucid. However, there are several points which are debatable. Dr. Sprague repeatedly makes the point that marijuana is extremely deleterious to the user's health. She cites many studies which enumerate the various organ systems that are damaged by the use of marijuana.

However, in none of her comments does she address the question of dose/toxicity relationship. In fact, most of the studies she cites are studies done with heavy users or animals given pharmacological dosages. Very few of the studies address typical recreational use in social settings among healthly adults.

She also does not distinguish between the acute mental effects of the drug and the chronic effects, a very important distinction.

She lacks any statistical morbidity and mortality data, which is readily available with alcohol and motor vehicle accidents. How many people have died from marijuana use? How many have been injured?

On the other hand, her contention that marijuana use by

children and adolescents is deleterious to their health, as well as to their minds, is indisputable. There is no doubt that frequent marijuana use in this age group is a cause for amotivational syndrome, disordered thought processes, and many of the other problems she cites.

However, it is not fair to assume that the same must be true of adults who use it in a recreational form. Considering the great number of adults who use marijuana recreationally, but who are able to maintain productive and stable lives, it becomes difficult to justify Dr. Sprague's conclusion that we must teach our children that this drug should be strictly proscribed even for adults.

In my estimation, the education concerning this drug should be very similar to that given children and adolescents concerning alcohol, a drug whose potential for true addiction and damage to one's health is markedly greater than marijuana. The parents and teachers of youths who are exposed to peer pressure to use this drug have a responsibility to explain to them that this is not necessarily a dangerous drug in terms of acute toxicity, progression to harder drugs, or drug addiction, but that it **may** do these things if abused.

The reason for this distinction is that youths who then use marijuana and find that they have a very pleasurable experience, but do not immediately have their health adversely affected, do not crave stronger drugs, and do not become immediately addicted, will naturally and understandably mistrust their parents and teachers for having told them that these things would occur. Their authority figures then lose credibility.

Rather, parents and teachers must provide the environment and rapport with youths that allow for open conversation, understanding, and realistic expectations. The hard sell will not work for today's rather sophisticated and drug-wise adolescent.

The legalization issue is much more complex than Dr. Sprague allows. She blithely dismisses the criminal element involved in drug trafficking. This is inappropriate, as it remains one of the more malignant effects of the illegality of marijuana. Organized crime is heavily involved in every aspect of the production, transportation, and sales of this drug and contributes to promotion of its use by youth. The "pusher" is a direct outgrowth of the criminal mentality. (Have we seen any "pushers" of alcohol on our school grounds?)

The fact that a large minority of American adults use marijuana on an occasional basis makes enforcement of the proscription on this drug nearly impossible unless measures, such as the screening test alluded to by Dr. Sprague, are administered on a wide-scale basis. The conditions for the use of such a test would be very difficult to determine, and one wonders what effect this would have on the civil rights of the individual. Children and adolescents might learn disdain for the law as they see adults using this illegal drug. Could they make the distinction between marijuana use and speeding or between marijuana use and thievery?

Finally, along these lines, the coming specter of spraying illegal "pot" fields with paraquat or diesel oil, as is being considered currently by the Department of Justice in an attempt to eliminate marijuana and intimidate users, is but a logical extension of the criminalizing mentality that we take toward this widely used drug. As an internist and intensivist, I am terrified by the prospect of unwary children, adolescents, and adults being treated in ICUs for terminal pulmonary fibrosis. And who knows what effect the ingestion of diesel fuel might be!

Despite widespread educational programs in schools, on television, and in the home for the last 15 to 20 years since the "drug culture" of the '60s, and despite stronger penalties, there has been no decrease in the use of marijuana in this country in all age groups. It is, however, the increasing rate of use among the very young that most alarms us.

A more reasonable and less phobic response to the use of marijuana among children and adolescents must be sought. Making punishment more stringent or emphasizing the bad health effects for all users will not work. Widespread use of screening tests for THC may threaten civil liberties.

A more plausible solution would be to handle this drug in the same way that alcohol is handled. There is nothing intrinsically worse about marijuana as compared to alcohol. Both are widely used, both have a potential for abuse, and both should be kept out of the hands of children and adolescents.

If marijuana were legalized in the same manner that alcohol is legalized, it then could be regulated and standardized, and a rational educational system could be carried on. This would immediately decriminalize the activity, the growth, and the distribution of marijuana by decreasing its cost and increasing its availability to adults through legal means. Its cultivation and processing could be regulated, and the government could make certain that additives and preservatives were controlled very much as they are in the cigarette and alcohol industry. The distribution could take place through liquor stores to be sold only to adults. Minors no longer would see smoking marijuana as a "forbidden experience," but would see it rather as "illegal" in the same manner that their use of alcohol would be.

By demystifying marijuana in this manner, we would be making it equivalent to alcohol as something one does in moderation as an adult, if one so desires. Educational programs could then treat all substance abuse as disease, which indeed it is. Such an approach would be readily understandable to the teen-ager faced with peer pressure to use either marijuana or alcohol.

Revenues from the sale of alcohol and marijuana could easily be used to fund such an educational program, as well as a rehabilitation program for abusers and programs to curb driving under the influence of either.

The role of the "pusher" would substantially decrease; therefore less cocaine, fewer narcotics, and other drugs would make their way to our children.

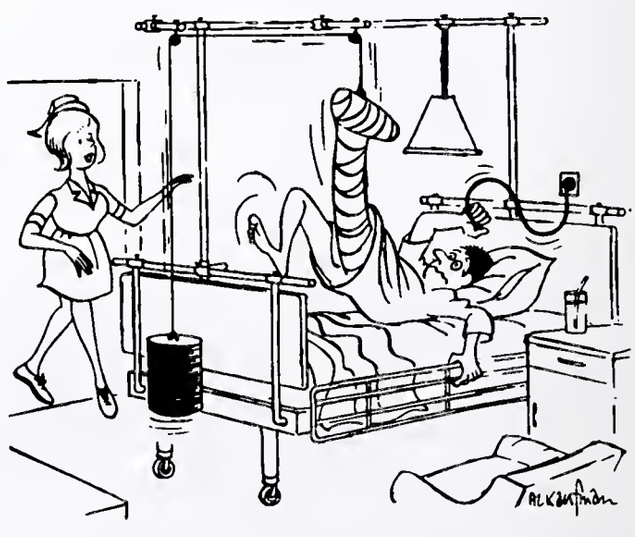
Unfortunately, marijuana is with us to stay. It is not something that can be wished or legislated away simply because we do not like the idea or the practice. In this sense, it is very similar to the 1920s' Prohibition period, with its ineffectuality and violence.

Although I can empathize with Dr. Sprague's personal experience, I do not think that her solutions are the ones that will necessarily work. We must move away from an emotional response to the disease and toward a reality-oriented approach with a healthy respect toward the magnitude and complexity of the problem.

In the final analysis, we also must look for the problem in our families and our society which make young people want to use all of these drugs and to seek other forms of escape.

Our real challenge is to address the hopelessness and despair in the rising generation. Where does it come from? What can we do about it? There are no easy solutions.

Steven M. Moser, M.D.
Wailuku, Maui



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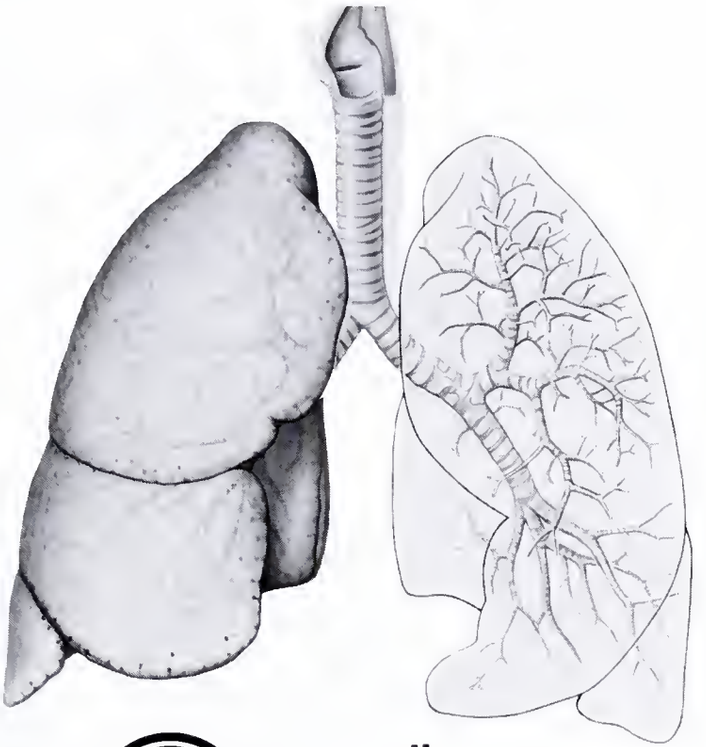
SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Apr. 3-6, 1985	Seminar XXV: the Sexual Assault of Children and Adolescents—Detection, Litigation, Treatment, Sentencing Alternatives and Prevention, Alternatives to Sexual Abuse, P.O. Box 25537, Portland, Ore. 97225, (503) 644-6600. Travel agent: Sonny's Tours of Hawaii, (800) 367-5111. Location: Hilton Hawaiian Village, Honolulu.
Apr. 6-12, 1985	Australian and American Psychosomatic Obstetrics and Gynecology Combined Meeting, Dr. Lorraine Dennerstein, Department of Psychiatry, Austin Hospital, Heidelberg, Victoria 3084 Australia, or Dr. David Young, 131 Chadwick Street, Portland, Maine 04102. Location: Hotel Inter-Continental Maui
Apr. 6-13, 1985	Emergency Medicine, USC School of Medicine, Post-graduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929, or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa Street, Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511, (213) 746-1384. Location: Royal Lahaina Maui.
Apr. 8-11, 1985	Diabetes Mellitus—Modern Management Methods, Loma Linda University School of Medicine, Loma Linda, Calif. 92350, (714) 824-4421. Location: Maui Marriott.
Apr. 12-17, 1985	Hawaii Spring Meeting Western Regional Chapters, Society of Nuclear Medicine, Society of Nuclear Medicine, Western Regional Chapters, Box 40279, San Fransicso, Calif. 94140, (415) 647-1668, Location: Hotel InterContinental Maui.

(Continued on page 126)

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Indications and Usage Ceclor (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out

Precautions: *General Precautions* — If an allergic reaction to Ceclor* (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest* tablets but not with Tes-Tape* (Glucose Enzymatic Test Strip, USP, Lilly)

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy — *Pregnancy Category B* — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers — Small amounts of Ceclor* (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70)

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200)

[061782R]

Note: Ceclor* (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information

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400440

Psychological Therapies for Chronic Pain

William T. Tsushima, Ph.D., Honolulu*

• *Chronic pain is a widespread disorder that is costly to patients and the entire health care system. Recent developments by psychologists and psychiatrists offer relief to many who otherwise may be told to live with their pain. This paper discusses current uses of hypnosis, relaxation training, biofeedback, operate conditioning, and cognitive-behavior therapy with the chronic pain patient.*

Despite continued improvement in medical and surgical techniques for the relief of pain, there are significant numbers of patients who are not treated successfully and are afflicted with a chronic pain disorder. Pain specialist John Bonica estimates that 86 million in the U.S. have some form of chronic pain and that the cost of treating these patients amounts to $60 billion annually.[1]

Major efforts have been made by psychologists and psychiatrists to assist chronic pain patients, the most frequently employed methods being hypnosis, relaxation training, biofeedback, operant conditioning, and cognitive-behavior therapy. The aim of this paper is to describe these techniques and review their current status with regard to their clinical effectiveness.

Hypnosis

Hypnosis is one of the oldest techniques used for the management of pain. In the early 19th century, hypnosis, or mesmerism, was employed to provide analgesia during surgery. However, after the introduction of ether in 1846 and chloroform in 1847, the practice of performing surgery under mesmeric sleep died out rapidly.[2]

Clinical hypnotists have devised a number of ingenious approaches to pain management. Some of these include simply telling the hypnotized patient that the pain will lessen or perhaps not be felt at all, or initiating hypnotic glove anesthesia as a way to transfer numbness in the painful area. Hypnosis has been a subject of controversy because the mechanism by which it works is not well understood. Most experts agree that hypnosis alters the person's awareness of pain with mental relaxation, a narrowing of attention, and heightened suggestibility.[3] In general, greater success in pain relief is obtained by those who are more hypnotizable.

A number of laboratory studies have found hypnosis to increase tolerance for experimental pain. In addition, clinical hypnosis has been reported to alleviate a wide variety of pain syndromes, including headaches, low back pain, trigeminal neuralgia, dental pain, cancer pain, phantom limb pain, and pain from burns.[2] Though hypnosis has been used longer than any other psychological method of analgesia, the clinical research in this area is sparse, weak in methodology (e.g., lacking controlled condition), and has failed to demonstrate that hypnosis has more than a placebo effect in relieving chronic pain.[4]

Relaxation Training

The primary purpose of this widely used technique is to relax tense muscles believed to cause musculoskeletal pain and related disorders (e.g., tension headaches). Additionally, relaxation training helps the pain patient by reducing anxiety which heightens the pain experience, by diverting the attention away from the pain, and by increasing the patient's perception of self-control.

Many variations of relaxation training currently are practiced. Most involve the tensing and then relaxing of major muscle groups throughout the body, as proposed by Edmund Jacobsen.[5] Other relaxation techniques included slow deep breathing, meditation, autogenic training, imagery, and relaxing sounds or music.

The various types of relaxation training procedures have been reported to produce significant relief of tension headaches, as well as migraine headaches. The evaluation of relaxation training with other chronic pain syndromes have been few.[4,6] Good results have been obtained in studies of myofascial pain dysfunction and temporomandibular joint pain.

Biofeedback

Biofeedback is a technique that employs an apparatus that electronically monitors psychological events, such as muscle tension or hand temperature, and provides feedback of these bodily functions to the patient. The patient can use the feedback information to become more aware of the body's functions and to bring these functions under control.

Although various types of feedback, such as EEG and GSR, have been applied to a wide range of pain syndromes, therapists have dealth almost inclusively with EMG and temperature biofeedback for the treatment of headaches. Forehead EMG feedback commonly has been employed to teach patients how to relax forehead and scalp muscles to decrease tension headache activity. Hand temperature biofeedback has been used to decrease cranial sympathetic activity and migraine headache symptoms.

For pain disorders other than headache, fewer studies have been reported (e.g., Raynaud's syndrome, TMJ pain, phantom limb pain). Several studies comparing the effectiveness of EMG biofeedback with relaxation training procedures generally find similar results in reducing tension headaches.[7]

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Operant Conditioning

Operant conditioning refers to the shaping of behavior as a function of positive, rewarding consequences (or avoidance of negative, aversive consequences). The pigeon learning to press the correct lever in order to obtain food is a classical example of operant conditioning. In terms of pain and pain patients, certain pain behaviors (e.g., complaining) are reinforced by positive consequences (e.g., sympathetic attention, pleasant effects of analgesics) or avoidance of aversive consequences (e.g., unpleasant job or responsibilities).

Fordyce and his associates at the University of Washington have aroused great interest in the application of operant conditioning to pain management, particularly with inpatients.[8] His approach is to decrease learned pain behaviors and replace them with behaviors inconsistent with the sick role. This is done by rewarding desired well behaviors (e.g., increased activity) and not rewarding pain behavior.

In a hospital setting, Fordyce's staff ignored the patient's pain behavior and praised actions inconsistent with the sick role. The program also included sessions with the patient's family; consultations with the patient's physicians, attorney, and insurance carrier; vocational rehabilitation; physical therapy; occupational therapy; and systematic decrease in medications. The patients rated themselves as having substantial decrease in pain, but continued to have considerable pain nonetheless. They also reported increase in activity levels (e.g., more hours working per day), gradual decrease of analgesics, and improvement in emotional functioning. Many hospital units have applied the Fordyce techniques with successful outcome. However, because of its multidimensional approach, it is not possible to determine the unique contributions of operant conditioning techniques to reducing chronic pain behaviors. Thus far, there is no good information on its use with outpatient pain management.

Cognitive-Behavior Therapy

The most recent development in the psychological field of pain control has been the application of cognitive-behavioral techniques to the management of pain.[9] The basic assumption is that cognitions (thought, attitudes, beliefs, expectations) that people have in certain situations can determine their emotional reactions in those situations. For the pain patient, cognitions (e.g., significance of the pain) and emotions (e.g., anxiety) influence the experience of pain.

In cognitive therapy, patients learn to identify faulty beliefs (e.g., "The pain today is more severe than yesterday; therefore, I am going to get worse.") and to substitute more positive thoughts (e.g., "I can handle the pain.") Patients are taught specific cognitive skills, such as visual imagery (pleasant image incompatible with pain) or distractions (interesting thoughts, focus away from self) as ways to cope with painful events. The therapy also involves behavioral changes, such as relaxation techniques and assertion training.

A number of studies have evaluated cognitive-behavioral treatments for pain syndromes such as headaches, back pain, surgical pain, and burn victims. This treatment approach shows potential to alleviate pain in a variety of disorders and in a promising area for future clinical use, including in a group treatment format.[4,6]

Conclusion

The psychological therapies mentioned above address a wide range of chronic pain problems. Hypnosis has been found to be effective with many atypical pain disorders, such as cancer pain and phantom limb pain. Relaxation training and biofeedback appear to benefit patients with muscle contraction symptoms, such as tension headaches and neck and back pain. Operant conditioning is particularly helpful in increasing physical activity levels and decreasing medication use. Cognitive-behavior therapy has been shown to reduce pain complaints and suffering, especially those who have low pain tolerance and fear of pain.

In Hawaii these techniques are applied in many private offices as well as hospitals, including the Rehabilitation Hospital of the Pacific, St. Francis Hospital, and Straub Hospital. There appears to be a recent increase in clinical hypnosis locally, and the practice of relaxation training, biofeedback and cognitive-behavioral methods also are being called upon for the management of difficult pain patients.

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CME

(Continued from page 122)

Apr. 12-28, 1985	*Medicine in China: East and West, Dr. J. Wellington, University of Hawaii School of Medicine, Continuing Medical Education, 1960 East-West Road, Honolulu, Hawaii 96822, Dee Chang, (808) 948-6949. Location: 16-day tour of China.
Apr. 13-20, 1985	Law and Medicine: Medical Malpractice, Informed Consent, National Medical Seminars and the Academy of Law and Medication, (916) 972-8367. In California call (800) 331-4747. Location: Hilton Hawaiian Village.
Apr. 14-19, 1985	Adult and Pediatric Radiology for Emergency and Primary Care Physicians, University of California, San Diego School of Medicine, Office of CME, M-017, La Jolla, Calif. 92093. Location: Kauai.
Apr. 15-19, 1985	Anesthesia and the Cardiac Patient, the Institute for Postgraduate Education, (616) 948-8377. Location: Royal Lahaina Resort Hotel, Maui.
Apr. 15-19, 1985	ECG Interpretation and Arrhythmia Management, International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colo. 80112, (303) 790-8445 or (800) 525-8651. Location: Maui.
Apr. 20-27, 1985	Diagnostic and Therapeutic Skills in Internal Medicine, University of Southern California, Postgraduate Education, 2025 Zonal Avenue, Los Angeles, Calif. 90033, (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa Street, Suite 217, Los Angeles, Calif. 90007, 9800) 821-5094, (800) 521-6511, (213) 746-1384. Location: Mauna Kea Beach Hotel, Kamuela, Hawaii.
Apr. 27-May 4, 1985	Management of the Surgical Patient, Stanford University Medical Center, Office of Postgraduate Medical Education, Room TC 129, Stanford, Calif. 94305, (415) 497-5594. Location: Mauna Kea Beach Hotel
Apr. 29-May 4, 1985	Initial Management of Life-threatening Illnesses and Injuries, USC School of Medicine, Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929, or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa Street, Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511, (213) 746-1384. Location: Mauna Lani, Big Island of Hawaii.
Apr. 29-May 3, 1985	Preparation and Trial for a Medical Malpractice Case, Physicians' Seminar Services, (714) 787-8580. Location: Honolulu.

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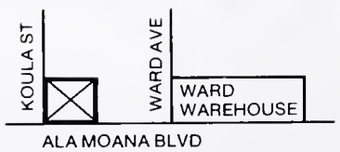
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Hemolytic Anemia:

Experience in a Community Hospital

Francis H. Fukunaga, M.D., Honolulu*

• *Anemia is a common clinical finding that may be the result of a number of different causes such as iron deficiency, vitamin deficiency, absolute or relative bone marrow failure, and hemolysis. The hemolytic anemias are characterized by the premature death of the red blood cells. Intracorporeal causes are due to abnormalities of the red blood cells and extracorporeal causes are due to extra-erythrocytic processes acting upon normal red cells. The most common extracorporeal cause of hemolytic anemia is an immunological event and other causes include physical factors and infectious, animal, and vegetable agents.*

The immunologic types of hemolytic anemias include the isoantibody induction seen in transfusion reactions and in hemolytic disease of the newborn, the autoimmune type where there is an aberrant immune response initiated by the host against his own red cell antigen and the group of drug-induced Coomb's positive hemolytic anemias. Most immune hemolytic anemias have IgG and/or complement on the red cells that can be detected by the direct antiglobulin (Coomb's) test, but there are a few cases that are negative. This negativity may be due to too low an antibody concentration to be detected or the antibody may be IgM or IgA, which are not detected by the usual reagents.

Results

The patients in this study were seen at the Kuakini Medical Center over a period of 5 years. Most of the patients were seen for evaluation of jaundice or systems of anemia. The age range in this study was 23 to 86 years and the sex distribution was about equal (see table).

There were 17 cases of hemolytic anemia over a period of 5 years and 11 of these were due to a drug: 6 methyldopa, 2 cephalothin, 1 ampicillin, 1 chlorambucil, and 1 tolinase. One patient (Case 5) was on many unidentified medications that may have caused an hemolytic anemia. There was one case of hemolysis due to Plasmodium falciparum in a woman who had just visited Africa, 3 cases of malignancy (malignant histiocytosis and 2 cases of lymphoma, one of which was being treated with chlorambucil), a case of subacute bacterial endocarditis in a man with a bicuspid aortic valves, and one case of hemolytic anemia of undetermined cause (Case 13). This latter case was a 43-year-old man who was admitted with jaundice, fever, and abdominal pain. He was seen 3 years previously with the same symptoms and signs. Liver enzymes, cholecystograms, and scans of the liver and spleen were normal. The bone marrow showed erythroid hyperplasia. The direct Coomb's was positive, the serum total bilirubin was elevated, and the haptoglobin was depressed to suggest an immunologic type of hemolytic event.

Discussion

Pharmacotherapy has brought increasing numbers of complications, one of which is drug-induced hemolytic anemia in addition to the more frequently encountered drug-induced positive antiglobulin (Coomb's) reaction that causes difficulty in blood cross-matching procedures.[1] Drug-induced hemolytic anemia is not common and the patient often had taken the drug previously without any adverse effects. There are multiple categories or mechanisms of drug-related hemolysis.

Penicillin is a "hapten type" of drug that binds firmly to proteins on the surface of red cells, and attachment by an antibody causes hemolysis. The major haptenic determinant is the benzylpenicilloyl (BPO) group. This type of drug-induced hemolysis occurs only with massive doses of penicillin. About 3% of patients receiving massive doses of penicillin will develop a positive direct Coomb's and only a very small percentage of these individuals develop hemolytic anemia. Quinidine and stibophen are examples of the "innocent bystander type" cause of hemolysis. The antigen-antibody complex attaches to any cell, red blood cells, white blood cells, or platelets with subsequent destruction of the respective cell. It is unknown why only RBCs are destroyed in some while others suffer only platelet destruction. The alpha-methyldopa type of red cell destruction is by an unknown mechanism. The manner of antibody production is unknown, the sensitization develops slowly, and it is dose-related. About 25% of patients develop direct Coomb's positivity, but only a small number develop hemolytic anemia. The patients revert to normal once the drug is discontinued in a few weeks or months, but the problem may last up to 2 years. The cephalosporins are rare causes of hemolytic anemia. About 4% of patients receiving cephalothin become Coomb's positive and many of them are azotemic and hypoalbuminemic.

There are other non-immunologic causes of hemolysis due to drugs. Hemolysis may be due to deficiencies of the enzymes glucose-6-phosphate dehydrogenase and pyruvate kinase. The drug or chemical may have a direct effect on the red blood cells to cause hemolysis as with aniline and other industrial chemicals, phenylhydrazine, snake venom, and vitamin K analogs in the newborn.

The diagnosis of hemolytic states requires the demonstration of increased red cell destruction and elucidation of the cause. Normal red cell survival in circulation is about 120 days. About 1% are destroyed, but are replaced daily. The normal reticulocyte count is 0.2% to 2.0%, and this activity can increase 6 to 8 times in response to hemolysis. When this compensatory capacity is exceeded,

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TABLE. Patient Data

Patient	Sex	Age	Coombs		Hemoglobin		Bilirubin		Haptoglobin	Cause
			Dir	Ind	Hi	Low	Low	Hi		
1. MMi	F	73	+	+	9.0	5.8	1.1	2.2	D	Methyldopa
2. FW	F	84	+	+	13.7	7.0	ND	1.4	ND	Cephalothin
3. KY	F	86	+	−	12.0	7.0	.6	1.6	D	Methyldopa
4. MN	F	42	−	−	12.0	10.0	1.4	3.8	D	Ampicillin
5. CN	F	23	−	−	11.0	6.2	ND	1.5	D	Various pills
6. RT	M	73	+	+	9.0	6.5	1.2	5.4	D	Chlorambucil (lymphoma)
7. IC	M	78	+	+	10.0	6.8	ND	ND	D	Methyldopa
8. MMa	M	58	+	+	15.0	6.6	1.0	2.2	D	Methyldopa
9. HI	M	74	+	+	12.0	7.7	1.1	8.6	D	Cephalothin
10. NG	M	72	+	+	8.0	5.7	ND	2.6	D	Methyldopa
11. IS	M	79	+	+	10.0	6.0	ND	2.7	D	Methyldopa
12. EO	M	77	+	+	12.0	5.6	ND	5.8	D	Tolinase
13. MY	M	43	+	−	13.0	10.5	ND	3.2	D	?
14. MK	F	66	−	−	12.0	8.0	.4	2.2	D	Malaria
15. JH	F	23	−	−	14.0	11.0	1.0	3.1	ND	Malig. Hist.
16. TW	F	98	−	+	9.6	7.2	1.0	1.7	D	Lymphoma
17. JG	M	39	−	−	13.5	10.7	1.4	3.1	D	SBE

D = decreased ND = not done + = positive − = negative

anemia occurs.

The indications of increased red cell destruction include: hyperbilirubinemia with or without jaundice, depletion of serum haptoglobins and hemopexin, hemoglobinemia, hemoglobinuria, hemosiderinuria, increased urine and fecal urobilinogen, manifestations of red cell damage such as fragmentation, Heinz bodies and spherocytosis, compensatory mechanisms such as reticulocytosis, and bone marrow erythroid hyperplasia. Shortened red cell survival is the best evidence of hemolysis, but this determination is usually not necessary because the diagnosis of hemolysis is made by simpler laboratory tests and clinical features.[2]

Summary

Acquired hemolytic anemia was seen in 17 patients at the Kuakini Medical Center over a 5-year period. Of these cases, 11 were due to a drug, methyldopa being the most common, but others included cephalothin, ampicillin, chlorambucil, and tolinase. There was an additional patient who was on multiple medications of unknown types that may have been the cause of her hemolytic anemia. Two cases attributable to infectious agents were due to malaria and SBE in a biscuspid aorta. There were 3 cases of malignancy, malignant histiocytosis and 2 lymphomas. One patient had no obvious cause for his hemolytic anemia.

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* * *

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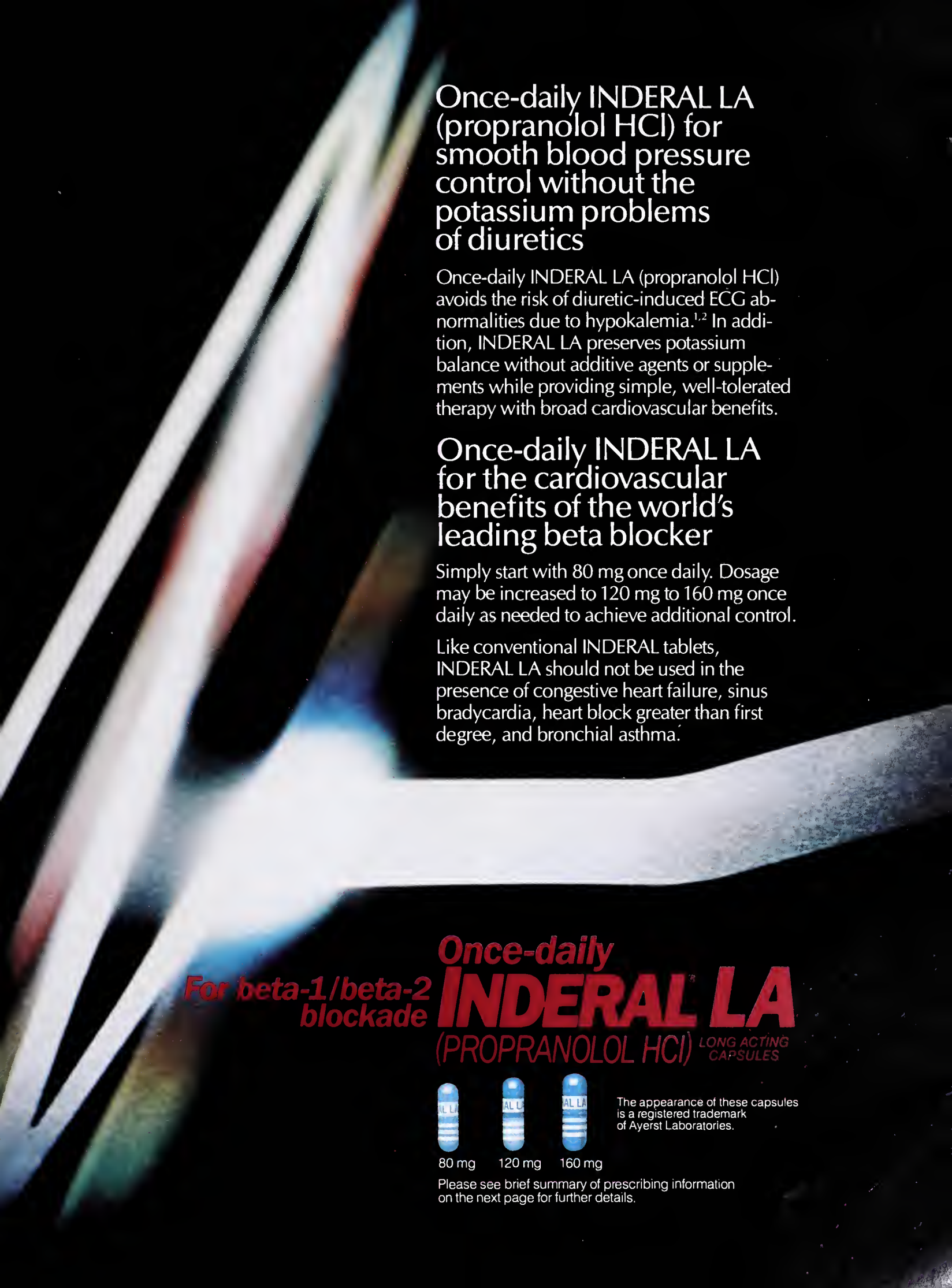
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Simply start with 80 mg once daily. Dosage may be increased to 120 mg to 160 mg once daily as needed to achieve additional control.

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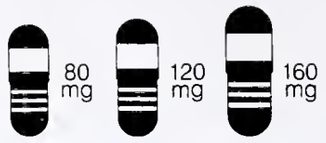
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**
DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.
CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of symoathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.
INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block; 3) bronchial asthma; 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.
WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.
PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.
ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.
DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

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Evaluation of Selected Aspects of the Oahu Emergency Medical Services Program

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• *Hawaii has been developing a comprehensive modern Emergency Medical Services (EMS) program in phases since 1971. In 1974 a preliminary evaluation was performed to examine limited aspects of the EMS program. By 1975 a decision was made to examine the function and results of the EMS program on the Island of Oahu, City & County of Honolulu.*

The objectives of this critical examination were to be as follows:

Objective 1
- To calculate and compare the high-risk cardiac and high-risk trauma mortality rates for critical (c) and serious (s) patients for all of 1975.

Objective 2
- To calculate and compare the mean length of hospital stay for high-risk cardiac and high-risk trauma cases during the 12-month period, January 1, 1975, through December 31, 1975.

Objective 3
- To determine the utilization rate of procedures and techniques taught to the Mobile Intensive Care Technician (MICT) personnel.

Objective 4
- To determine for all critical (c) and serious (s) cases the mean period of time from the time of notification of the emergency vehicle until the arrival of the vehicle at the scene until the transport of the patient to the emergency room.

Objective 5
- To determine the age distribution of high-risk cardiac and high-risk trauma patients.

Objective 6
- To correlate high-risk trauma mortality rates and high-risk cardiac mortality rates (for users of emergency medical services) with travel times and/or level of training (i.e., EMT or MICT).

The analysis of these objectives was made in a straightforward manner and no attempts were made to "evaluate" in terms of making judgmental statements or in terms of drawing conclusions on arbitrary processes.

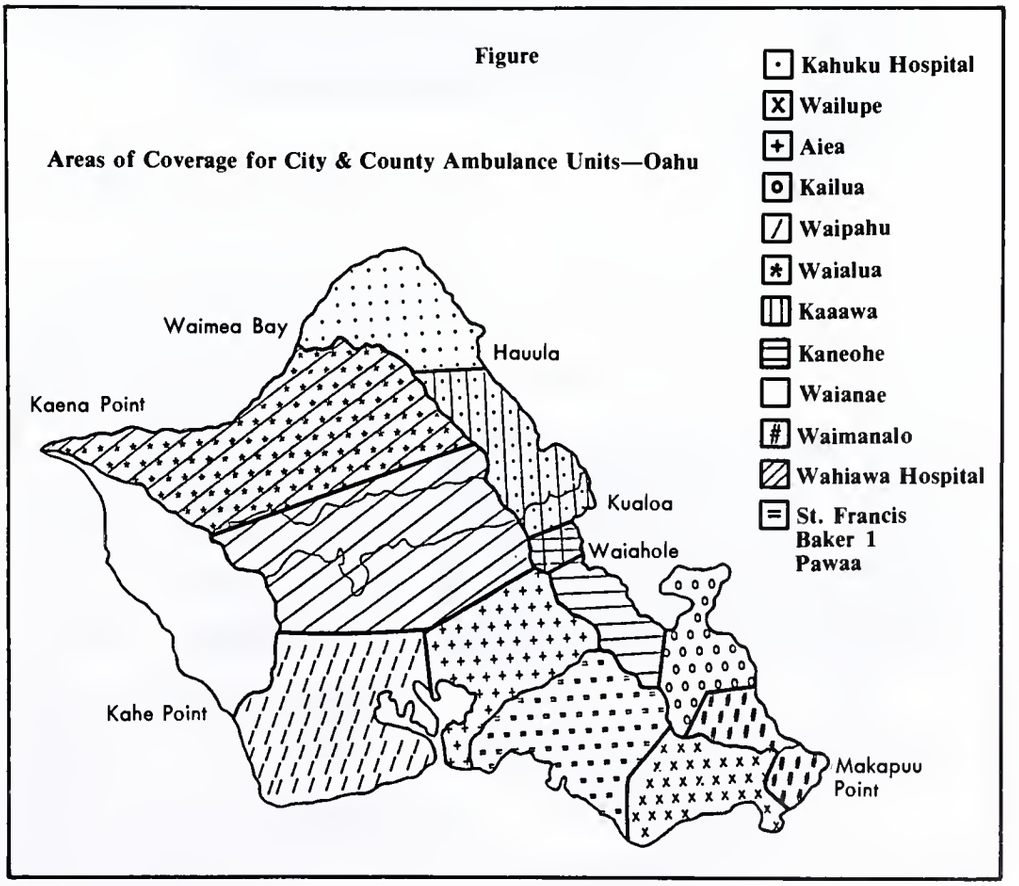
Methods

This evaluation is based upon data from all patients treated by ambulance personnel from 12 Oahu City & County (C&C) of Honolulu ambulance stations, including its 3 contract stations (Fig. 1). The period of study was January 1, 1975, through December 31, 1975.

Data was collected from these 3

Figure

Areas of Coverage for City & County Ambulance Units—Oahu



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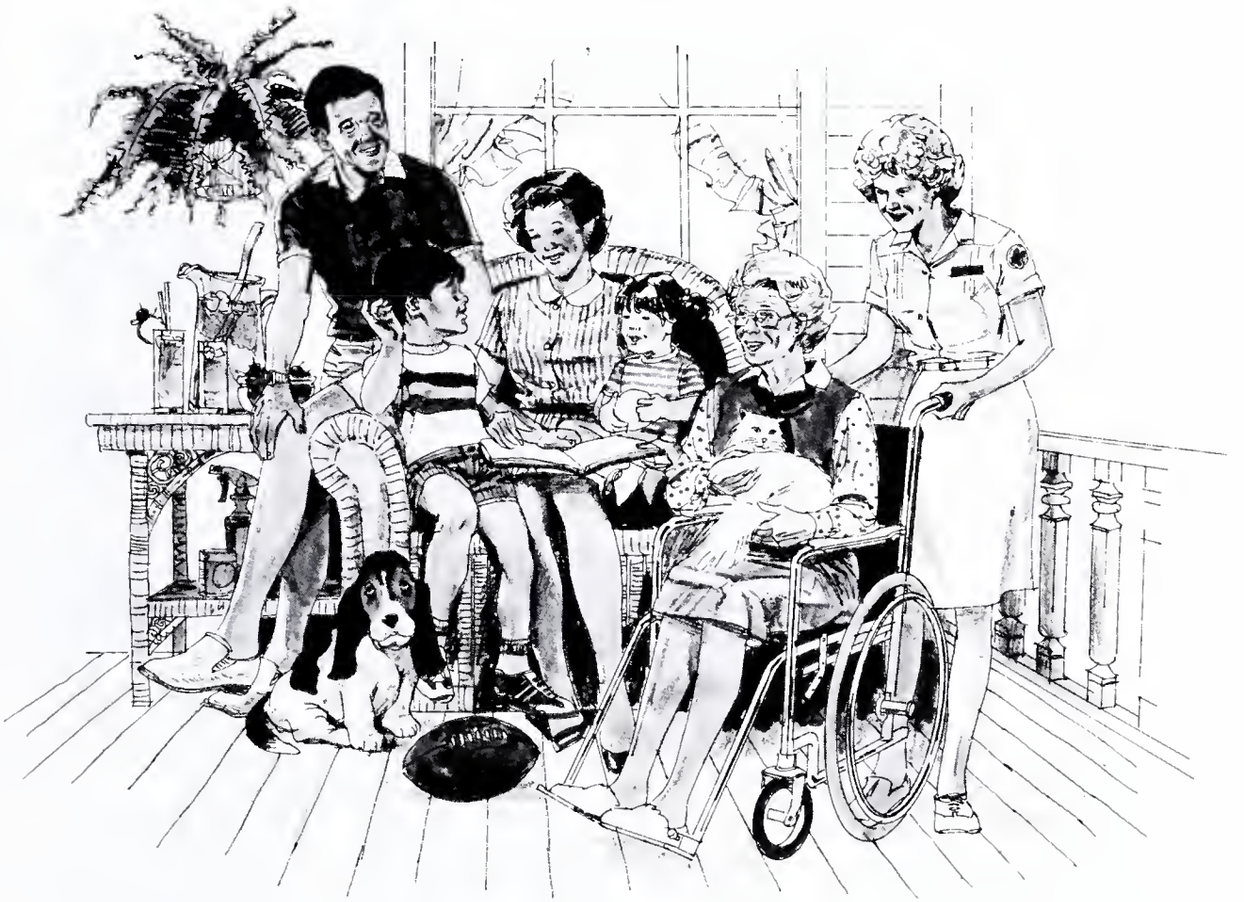
1. Data tapes from the C&C of Honolulu contained data from the Ambulance Patient Care Report Forms (APCRF). These forms were filled out by the Emergency Medical Technician (i.e. EMT) and Mobile Intensive Care Technician (i.e. MICT) ambulance personnel. One form was completed per patient whenever an ambulance unit was dispatched, including all standby and canceled calls, except when a call was canceled before a response was initiated. Therefore, complete data theoretically was available for each patient treated by ambulance personnel.
2. The APCRFs provided data that was not available on the computer tape, most significantly the patient's name. The patient's name was essential in order to trace the patient through the system and complete certain objectives of the evaluation. All patient names were kept confidential within the study team.
3. The hospital and emergency room medical records for facilities receiving the patient initially (or through transfer) were reviewed for 11 Oahu medical facilities in order to complete the objectives dealing with mortality and length of stay. All patient names were kept confidential within the study team.

Selected sub-populations of the total population served were used for each of the objectives. The utilization of criteria to select the appropriate population for a given objective and the incomplete reporting of various items required that the sample numbers in some sections of the analysis be smaller than preferred. This must be taken into account when interpreting all findings.

Some cases were not included in the study for the following reasons and specific objectives, as listed:

Reason for Exclusion	Objective
1. All cases with no trauma, cardiac, respiratory, neurological, medical, or obstetrical codes recorded on the APCRF.	1,2,3,4,5,6
2. All cases with no condition code recorded on the APCRF.	1,2,3,4,5,6
3. All cases with no patient name on the APCRF.	1,2,5,6
4. All cases discharged to home from the emergency room (since none of these met the high-risk cardiac or high-risk trauma criteria).	1,2,5,6

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TABLE 1. Cardiac Mortalities by Ambulance Station Units—1975

Unit Name (No.)	No. Cardiac Cases	No. Cardiac Cases/Month	No. Cardiac Mortalities	Mortality Rate Per 100 Cardiac Cases	No. Mortalities Per Month	No. Cardiac Deaths After Hospitalization
St. Francis (1)	49	4.1	25	51	2.1	8
Queen's (11)	43	3.6	21	49	1.8	4
Wailupe (8)	23	1.9	8	35	.7	4
Kailua (2)	22	1.8	10	45	.8	—
Kaneohe (4)	16	1.3	1	6	.1	2
Pawaa (5)	47	3.9	19	40	1.6	11
Waianae (7)	10	.8	1	10	.1	2
Waimanalo (9)	5	.4	1	20	.1	1
Waipahu (10)	7	.6	1	14	.1	1
Aiea (14)	19	1.5	12	63	1.0	—
Kahuku (13)	9	.8	3	33	.3	1
Wahiawa (12)	15	1.3	8	53	.7	2

5. All cases for which no records could be found in either the emergency room or the hospital.	1,2,5,6
6. All cases with no hospital destination codes on the APCRF.	1,2,5,6
7. All cases with one or more chronological times missing on the APCRF.	4
8. All cases with one or more times not in chronological order on the APCRF.	4
9. All cases with age information missing.	5

In cases where the patient was transferred from the emergency room to another hospital, the preliminary diagnosis made by the ER personnel was used to determine if the patient fell into a high-risk cardiac or high-risk trauma category. If the same person was picked up by the ambulance more than once during the study's time period, each episode counted as an individual case.

Findings and Discussion

A total of 20,738 emergency calls were recorded during the period January 1, 1975, through December 31, 1975, for the 12 C&C ambulance units on Oahu (Fig. 1). Of those 20,738 cases: 1,244 patients, or 6%, were classified as critical or serious cardiac or trauma patients. These 1,244 patients formed the subgroups for the population base for most of this study.

Objective 1

The mortality rates were calculated and compared for high-risk cardiac and high-risk trauma critical (c) and serious (s) patients (Tables 1 and 2) after using the following evaluatory screening criteria:

1. Serious (s) or critical (c) were designated on the APCRF by ambulance personnel using the following definitions:
 —Serious (s): Needs immediate treatment but will not die within 30 minutes.
 —Critical (c): Needs immediate treatment or will die quickly.
2. Application of high-risk cardiac and high-risk cardiac trauma criteria (Tables 3 and 4, respectively).
3. Exclusion of all cases with blank APCRF cardiac codes, trauma codes, condition codes, and hospital destination codes.
4. Follow-up, using patient name tracer, at the following hospitals: Castle, Kahuku, Kapiolani, Leeward, St. Francis, Wahiawa General, Children's, Kaiser, Kuakini, Queen's, Straub.
5. Only (c) and (s) patients included in the mortality study if the patient was alive when the ambulance attendant arrived at the scene and if the patient died before being transferred from the emergency room (i.e., the patient died enroute or died in the emergency room).

Upon using the criteria above for the 1,244 patients, the following were observed:

- 127 cases excluded for APCRF inadequacies.
- 590 cases excluded for not meeting either high-risk cardiac or high-risk trauma criteria.
- 527 cases were adjudged satisfactory for analysis, including 265 high-risk

TABLE 2. Trauma Mortalities by Ambulance Station Units—1975

Unit Name (No.)	No. Trauma Cases	No. Trauma Cases/Month	No. Trauma Mortalities	Mortality Rate Per 100 Trauma Cases	No. Mortalities Per Month	No. Trauma Deaths After Hospitalization
St. Francis (1)	29	2.4	2	7	.2	6
Queen's (11)	31	2.6	6	19	.5	3
Wailupe (8)	16	1.3	—	—	—	3
Kailua (2)	51	4.3	4	8	.3	3
Kaneohe (4)	17	1.4	—	—	—	—
Pawaa (5)	43	3.6	7	16	.6	5
Waianae (7)	11	.9	1	9	.1	—
Waimanalo (9)	7	.6	1	14	.1	—
Waipahu (10)	12	1.0	1	8	.1	2
Aiea (14)	21	1.8	2	10	.2	3
Kahuku (13)	9	.8	—	—	—	—
Wahiawa (12)	15	1.3	4	27	.3	—

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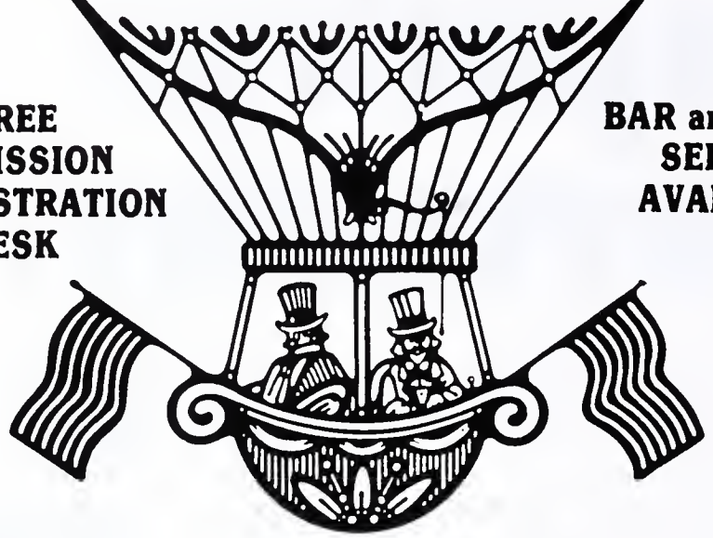
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cardiac criteria cases 262 high-risk trauma criteria cases.

The tabular data is presented according to the type of ambulance unit (Tables 1, 2, 5, 6, 8, 9). The uppermost 3 listings of the St. Francis (Charley 1), the Queen's (Baker 1), and the Wailupe ambulance units are for the 3 C&C of Honolulu MICT stations that were 100% staffed by MICTs throughout 1975 (c.f., in 1974 only 2 MICT units were in existence all year). The middle 6 units are the 6 C&C of Honolulu EMT-staffed ambulance units, which include the Kailua, Kaneohe, Pawaa, Waianae, Waimanalo, and Waipahu stations. The lowermost 3 listings of Aiea, Kahuku, and Wahiawa in the tables are for the ambulance units on contract to the C&C of Honolulu (Kahuku was a part-time MICT unit, and Aiea and Wahiawa were EMT units in 1975).

Objective 1: High-risk Cardiac Patients

Table 1 indicates the following ranked distribution of high-risk cardiac cases by ambulance unit for 1975: highest was St. Francis (49), Pawaa (47), Queen's (43), Wailupe (23), Kailua (22), Aiea (19), Kaneohe (16), Wahiawa (15), Waianae (10), Kahuku (9), Waipahu (7), and Waimanalo (5). The MICT versus EMT versus contract unit average demand comparisons for high-risk cardiac patients were: MICT (36.3 cases per unit per year), EMT (17.8 cases), contract (14.3 patients); this indicated that the highest average demand for services by high-risk cardiac patients was for MICT units.

TABLE 3. High-risk Cardiac Criteria

- Cardiogenic shock for any reason.
- Cardiopulmonary arrest (Code 500) for any reason.
- Acute myocardial infarction.
- Acute subendocardial infarction.
- Complete heart block (or 3°) or Stokes-Adams attack.
- Cardiac artificial pacemaker failure or non-capture.
- Three days or more of hospitalization for:
 - Acute severe pulmonary edema
 - Aute severe coronary insufficiency (decompensated)
 - Multiple runs of ventricular tachycardia
 - Acute congestive heart failure (ACHF)
 - ASHD, HCVD, organic heart disease, coronary artery disease (decompensated severe)
 - Acute severe CNS ischemia due to prolonged cardiac arrhythmias
 - Pre-infarction angina
- Significant premature ventricular contractions (PVCs):
 - Five per minute or more
 - R on T
 - Coupled
 - Multifocal
 - Bigeminal
 - Three in a row or more (ventricular tachycardia)

TABLE 4. High-risk Trauma Criteria

- Cerebral concussion, moderate, requiring three days hospitalization or more.
- Cerebral concussion, severe.
- Cerebral contusion, moderate, requiring three days hospitalization or more.
- Cerebral contusion, severe.
- Basilar skull fracture.
- Cerebral laceration.
- Intracerebral hematoma.
- Depressed skull fracture, excluding only anterior wall of frontal sinus.
- Linear skull fracture, requiring three days hospitalization or more.
- Epidural hematoma, acute.
- Subdural hematoma, acute.
- Partial or complete brain, brainstem, or cervical spinal cord transection.
- Gunshot wound to brain or cervical spinal cord.
- Cervical spine fracture, any level, with or without neurological deficit.
- Cervical spinal cord or thoracic spinal cord contusion, laceration, transection, epidural hematoma, subdural hematoma, or intramyelar hemorrhage.
- Tracheal laceration, fracture, crush, or rupture (including thyroid or cricoid cartilages).
- Traumatic pneumothorax, any size.
- Traumatic hemothorax, any volume.
- Cardiac tamponade.
- Traumatic pneumo- or hemo-mediastinum.
- Pulmonary contusion.
- Laceration or puncture of heart.
- Laceration or puncture of lung.
- Laceration or puncture of diaphragm.
- Pelvic fracture with pelvis hematoma, intra-abdominal organ damage, or intrapelvic organ damage.
- Laceration, puncture or transection of:

spleen	bladder
liver	vena cava
gall bladder	iliac artery/vein
stomach	renal artery/vein
duodenum	brachiocephalic artery/vein
pancreas	mesenteric artery/vein (SMA, IMA)
kidney	coeliac artery
aorta	subclavian artery/vein
small bowel	carotid artery
large bowel	jugular vein
uterus	pulmonary artery/vein

- Traumatic shock (BP < 80/60)
- Burns, 2nd and/or 3rd degree for 30% of body or more.
- Hemoperitoneum, gross blood.

The Table 1 high-risk cardiac mortality rates by ambulance unit are indicated for 1975. In terms of mortality rates, as averages, for each of the 3 major training level groups, the following were tabulated: highest was contract (53.5 deaths per 100 high-risk cardiac patients treated), MICT (47 per 100), lowest was EMT (30.8 per 100). The ranked mortality rates for high-risk cardiac patients by unit were: highest was Aiea (63 per 100 patients treated), Wahiawa (53/100), St. Francis (51/100), Queen's (49/100), Kailua (45/100), Pawaa (40/100), Wailupe (35/100), Kahuku (33/100), Waimanalo (20/100), Waipahu (14/100), Waianae (10/100), and lowest was Kaneohe (6/100).

Objective 1: High-risk Trauma Patients

Table 2 reveals the following ranked distribution of high-risk trauma cases by ambulance unit for 1975: highest was Kailua (51), Pawaa (43), Queen's (31), St. Francis (29), Aiea (21), Kaneohe (17), Wailupe (16), Wahiawa (15), Waipahu (12), Waianae (11), Kahuku (9), and lowest was Waimanalo (7). The MICT-EMT-contract unit average comparisons for high-risk trauma patients were: MICT (25.3 patients per station per year), EMT (23.5 cases), contract unit (15.0 patients).

Table 2 reflects the high-risk trauma mortality rates by ambulance unit for 1975. The ranked high-risk trauma mortality rates for 1975 by ambulance unit were: highest was Wahiawa (27 cases per 100 high-risk trauma cases treated), Queen's (19/100), Pawaa (16/100), Waimanalo (14/100), Aiea (10/100), Waianae (9/100), Waipahu (8/100), Kailua (8/100), St. Francis (7/100), Wailupe (0/100), Kaneohe (0/100), Kahuku (0/100). For the analysis of mortality rates as averages for each of the 3 major training level groups, the following were observed: contract (13.3 per 100 cases treated), MICT (10.5 per 100), EMT (9.9 per 100).

Objective 2

The mean length of hospital stay for high-risk cardiac and high-risk trauma cases handled by the 12 ambulance units during the 12-month study period was calculated and compared in order to obtain an index of morbidity for these patients. The data for this section is summarized in Tables 5 and 6, respectively, and was based on excluding the following cases from the original high-risk cardiac and high-risk trauma sub-population of 527 cases:

- 138 cases excluded upon demise of patient between time of ambulance arrival or up to and including the time in the emergency room.
- 61 cases excluded upon demise of patient during hospitalization.
- 30 cases excluded upon unavailability of follow-up after transfer.

Of the 527 original cases, 229 were excluded, leaving 298 cases for analysis for Objective 2.

Both the high-risk cardiac and the high-risk trauma ranges in length of hospital stay are quite wide. For the high-risk cardiac patients, the MICT-EMT-contract comparative average lengths of

TABLE 5.

Length of Hospital Stay—Cardiac Patients by Ambulance Station Units—1975

Unit	No. of Patients	Mean Length of Stay (Days)	§	Range in Length of Stay (Days)
St. Francis	16	13.1	7.4	2 — 24
Queen's	18	16.1	7.0	5 — 34
Wailupe	11	17.5	9.6	1 — 37
Kailua	11	7.7	4.6	3 — 15
Kaneohe	12	8.8	5.8	2 — 21
Pawaa	17	12.2	7.4	2 — 26
Waianae	7	13.6	14.3	3 — 48
Waimanalo	3	13.0	6.4	4 — 18
Waipahu	4	12.8	6.6	4 — 22
Aiea	7	13.1	5.5	3 — 19
Kahuku	4	7.5	3.2	4 — 12
Wahiawa	5	12.6	8.6	4 — 28

Key: § = 1 standard deviation

TABLE 6.

Length of Hospital Stay—Trauma Patients by Ambulance Station Units—1975

Unit	No. of Patients	Mean Length of Stay (Days)	§	Range in Length of Stay (Days)
St. Francis	19	12.2	11.6	2 — 48
Queen's	22	16.8	16.4	2 — 55
Wailupe	13	19.3	13.5	7 — 48
Kailua	38	9.0	11.1	1 — 62
Kaneohe	13	13.4	10.7	1 — 32
Pawaa	31	14.3	18.1	1 — 92
Waianae	9	24.1	20.7	3 — 63
Waimanalo	5	21.2	8.6	9 — 31
Waipahu	9	15.8	16.6	2 — 51
Aiea	12	16.5	13.9	2 — 42
Kahuku	2	12.5	10.5	2 — 23
Wahiawa	10	26.3	14.5	5 — 50

Key: § = 1 standard deviation

hospital stay were: MICT (15.4 days), contract (11.6 days), EMT (10.8 days). In contrast, the high-risk trauma patient comparative average lengths of hospitalization were: contract (20.3 days), MICT (15.8 days), EMT (13.8 days).

Objective 3

A determination of the utilization rate of procedures and techniques taught to the MICT personnel was done on all (c) and (s) patients of this study for the Queen's, St. Francis, and Wailupe MICT units. Unfortunately, for some sections of the APCRF, the forms were improperly filled out. The small number of cases for some sections was a problem. Since the number of cases was small, some rates were unstable. Therefore, the authors decline to publish on this section at this time.

Objective 4

The mean period of time from the moment of notification to the arrival of the emergency vehicle at the scene and to the transfer of the patient to the emergency room for all (c) and (s) cases for the nine C&C ambulance units was determined. Table 7 summarizes the data for these determinations. It was found that MICT-staffed ambulances spent an average of 28.9 minutes at the scene of the emergency, compared to 10.2 minutes average for the EMT units, upon the evaluation of 1,503 cases (of 1,688 cases (c) or (s), 171 were excluded for incomplete records and 14 were excluded for recorded errors). These analyses do not take into account the miles traveled, traffic density, roadway quality, vehicle condition, or support equipment.

Objective 5

The age distribution of the high-risk cardiac and high-risk trauma patients was evaluated upon analysis of 506 cases (of the 527 in the sub-population, 21 cases were excluded due to incomplete data). The data is summarized in Tables 8 and 9.

For high-risk cardiac patients the comparative average patient ages for MICT-EMT-contract units were: EMT (63.5 years), MICT (59.8), and contract (58.4),

TABLE 7. Average Time Elapsed at Selected Phases of Emergency Services by Ambulance Station Units—1975

Unit	Call Received to Response (Minutes)	Response to at Scene (Minutes)	Call Received to at Scene (Minutes)	Arrival at Scene to Depart Scene (Minutes)	Call Received to Depart Scene (Minutes)	Call Received to Disposition (Minutes)
St. Francis	.9	5.9	6.8	31.5	38.3	46.7
Queen's	.8	4.2	5.0	26.3	31.3	38.0
Wailupe	1.1	6.3	7.4	29.2	36.6	47.3
Kailua	.8	4.1	4.9	9.2	14.1	22.2
Kaneohe	.5	5.5	6.0	9.3	15.3	39.4
Pawaa	1.5	4.9	6.4	10.4	16.8	27.9
Waianae	.7	5.0	5.7	9.7	15.4	43.2
Waimanalo	1.0	8.2	9.2	13.1	22.3	32.4
Waipahu	.9	8.1	9.0	11.9	20.9	38.1

TABLE 8. Cardiac Patient Ages by Ambulance Station Units—1975

Unit	No. Cardiac Patients	Cardiac Patients Average Age	§	No. Male Cardiac Patients	Male Cardiac Patients Average Age	§	No. Female Cardiac Patients	Female Cardiac Patients Average Age	§
St. Francis	49	58.9	12.6	32	59.3	12.6	17	58.2	12.5
Queen's	41	59.7	12.1	36	57.9	11.1	5	72.6	10.6
Wailupe	22	61.8	14.6	14	58.9	11.8	8	67.1	17.3
Kailua	22	54.3	17.0	15	49.8	16.2	7	63.9	14.5
Kaneohe	16	71.6	10.9	8	68.4	11.1	8	74.9	9.8
Pawaa	46	65.0	13.1	33	65.6	12.6	13	63.6	14.2
Waianae	10	65.8	9.4	6	64.2	9.3	4	68.3	9.0
Waimanalo	5	60.4	7.7	3	57.7	6.5	2	64.5	7.5
Waipahu	7	63.0	13.5	5	58.6	9.9	2	74.0	15.0
Aiea	14	59.4	11.6	9	57.2	10.3	5	63.2	12.6
Kahuku	9	57.4	9.1	6	56.0	8.6	3	60.3	9.5
Wahiawa	15	58.0	13.5	10	61.0	13.4	5	52.0	11.5

Key: § = 1 standard deviation

indicating little difference in average age among the cardiac high-risk patients treated by the 3 groups of stations. The ratios of male to female cardiac high-risk patients were: MICT (2.7/1), EMT (1.0), contract (1.9). Average male patient ages for the 3 groups were: MICT (58.6 years), EMT (61.6 years), contract (58.4 years). Average female patient ages were higher: MICT (63.0), EMT (67.3), contract (58.2). No relationship between either age or sex with average cardiac mortality rates was evident.

For high-risk trauma patients, there were substantial differences between the average ages of the male and female high-risk trauma patients (males were younger than females).

The high-risk trauma patients (male and female) were younger than the high-risk cardiac patients (male and female).

Objective 6

This section is not reported since the small case number data base made it very likely that other unmeasured variables could significantly affect the results.

Summary

A straightforward, non-interpreted evaluation of selected aspects of the EMS-Oahu program for 1975 has been presented. The many unmeasured influential variables in this system preclude an elaborate interpretation at this time.

TABLE 9. Trauma Patient Ages by Ambulance Station Units—1975

Unit	No. Trauma Patients	Trauma Patients Average Age	§	No. Male Trauma Patients	Male Trauma Patients Average Age	§	No. Female Trauma Patients	Female Trauma Patients Average Age	§
St. Francis	29	38.2	22.4	18	33.9	17.2	11	45.3	27.5
Queen's	28	26.0	14.5	23	26.7	11.5	5	22.4	23.4
Wailupe	15	30.0	23.7	9	30.6	20.3	6	29.2	27.9
Kailua	49	31.1	19.0	32	29.8	17.4	17	33.5	21.6
Kaneohe	17	31.9	21.1	14	31.4	21.6	3	34.3	18.6
Pawaa	37	33.8	21.0	28	34.4	18.4	9	31.8	27.4
Waianae	11	22.7	14.1	8	28.3	12.3	3	8.0	5.1
Waimanalo	7	23.1	19.6	6	24.7	20.8	1	14.0	0
Waipahu	12	35.1	15.7	10	34.3	15.5	2	39.0	16.0
Aiea	21	26.0	13.7	14	27.9	14.5	7	22.3	10.9
Kahuku	9	23.9	15.7	8	26.8	14.3	1	1.0	0
Wahiawa	15	34.1	18.4	12	36.4	19.8	3	25.0	4.1

Key: § = 1 standard deviation

TABLE 10. Comparative High-risk Cardiac, and High-risk Trauma Patient Outcomes
1975
HMA — EMS Program, Honolulu, Hawaii

	Year	Pronounced Dead in ER	Expired in Hospital	Overall Mortality	Overall Survival	Total
Cardiac	1975	41.5% (n=110)	13.6% (n=36)	55.1% (n=146)	44.9% (n=119)	N = 265
Trauma	1975	10.7% (n=28)	9.5% (n=25)	20.2% (n=53)	79.8% (n=209)	N = 262



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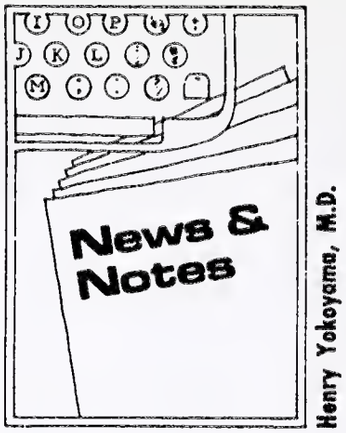
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Sportsmen

Retired radiologist 70-year-old **Tetsui Watanabe** ran the 12th Honolulu Marathon in 4 hours 19 minutes, which placed him first in his age group. He has been ranked 5th in the nation for his age group.

Kaiser urologist **Ulrich Stams** says joggers and other fitness enthusiasts in Hawaii may be susceptible to kidney stones. He feels that health-conscious people are taking mineral supplements they don't need. Ulrich consumes about 2 quarts of liquid every day, and when he is active outdoors he takes 10 ounces of water every 15 to 20 minutes. "I do this faithfully because I'm afraid of getting a stone. It's so painful." (And he should know.)

In October, **Ron Peroff** ran the Trick-or-Treat 10-K Run and was declared the overall winner. In December, **Jack Scaff** was one of 15 runners honored by Sporting Feet at the Hawaiian Regent for competing in all 12 Honolulu Marathons.

The Great Aloha Run, a 7.5-mile event scheduled for March 3, was announced by entertainer Carole Kai and race coordinator **Jack Scaff.** At least 12,000 participants are expected. The event is designed as a kickoff activity of the Carole Kai Bed Race festival and proceeds go to charity.

What were Bing Crosby's last words? "That was a great game of golf, fellers." (from Lou Boyd's Just Checking)

Miscellany

"What does the Emergency Alert bracelet of a Black epileptic say? I'm not break dancing." (As told to Clare Loo by George Suzuki.)

A bumpkin, upon arrival in the big city, was hit by a car. He woke up in an ICU bed with multiple injuries, and noticed his TV screen with wiggly lines and no picture. His quiet roommate had a similar TV screen, except that the lines had suddenly stopped wiggling. Someone yelled, "Code 500!" and started to pound the poor roommate's chest. White uniforms descended on the fellow, tormenting him with tubes and needles for the next half hour. Then they took him away. A new roommate was wheeled in

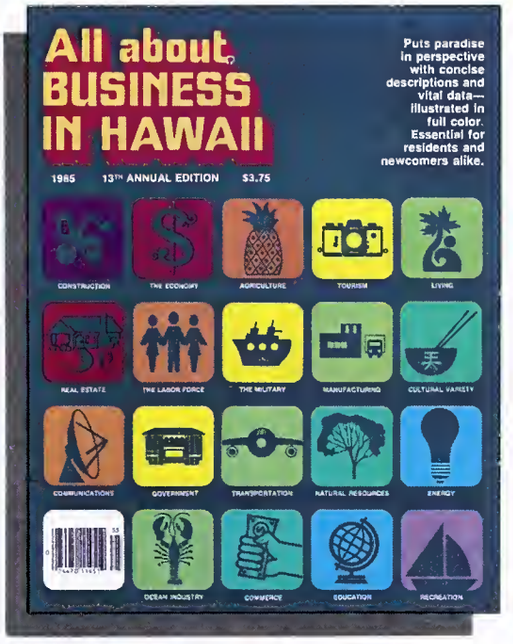
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on a guerney. The bumpkin warned, "Watch out for your TV screen. If you break it, they'll beat the hell out of you." (As told to Claire Loo by Kaiser internist Mark Chung.)

Conference Humor

"Thomas Jefferson once said, 'The purpose of the body is to carry the brain around.' But for many people nowadays, the purpose of the body is to carry the penis around." (Quoting Lawrence Corey who was lecturing on herpes at the 128th HMA annual meeting on Kauai.)

Bumper 'Snicker' Stickers

"All extremists should be shot." (KHVH radio commentator)

Marijuana Update

Marijuana contains the psychoactive drug THC, which affects the brain and severely irritates the lungs. The THC content in marijuana has risen 20 to 25 times since the 1960s. Marijuana delivers as much tar in one joint as a dozen cigarettes. Fifteen minutes of smoking pakalolo produces as much carbon monoxide in the smoker's blood as 10 to 20 cigarettes. Marijuana causes deterioration of psychomotor skills, paranoia/anxiety attacks, increased heart rate and circulation, reduced immunity to disease, apathy, withdrawal and hostility, impaired perception, permanent changes in brain function, impaired learning skills, and damaged reproductive systems.

Remarkable Case

Korean immigrant Chi Ho Ku was at his job at the Sun Noodle Factory smoothing dough as it came out of the mixer so it could be pulled through a roller into the cutting machine, when 2 fingers of his left hand got caught in the 6-foot-diameter roller. Before he knew it, he was pulled into the machine and his left forearm was mangled and torn off. Co-workers, seeing only his legs sticking out of the machine, pulled him free. Hours later, a team of surgeon,s which included plastic surgeon **F. Don Parsa,** and orthopedic surgeons **Gary Douglas** and **Robert Atkinson,** re-implanted the arm. Parsa, who is assistant professor of surgery at UH School of Medicine, says that plastic surgeons around the world are indebted to **Frank McDowell,** who was professor of surgery at the John Burns School of Medicine until his death in 1981, for the knowledge that severed limbs could be re-implanted. In 1958, Frank brought back this know-how after visiting Russia. Several years later, surgeons in Boston began re-implanting limbs. The technique eventually spread to research centers worldwide.

Entrepeneurs

Biodyne Institute, a non-profit organization based in San Francisco, has a federally funded researsh project on Oahu to see if mental health counseling to Medicaid patients will cut down the frequency of their visits to physicians. The Feds are paying $2 million over 5 years for the research being done at the Biodyne Center in the Ala Moana Pacific Center. The president and clinical director of Biodyne is Nicholas Cummings, a clinical psychologist; VP is Luis Fernendez, a research psychologist. They feel that the project will save Hawaii's Medicaid program from $10 million to $16 million over 5 years. The program cost $162 million in 1984. The project will focus on Medicaid's top 10% users (people who averaged $6,800 in medical bills annually), to provide personal and group counseling; weight-reduction and stop-smoking programs; and treatments for sleep disturbances, chronic nervousness, anxiety, chronic headaches, and other pain; eating disorders; and alcohol and drug abuse.

Ten physicians with practices in Central Oahu, Waipahu, and Pearl City/Aiea areas have signed up to form a new "Health Care Center" within the HMSA system. The physicians are **Warren Grebe, Timothy Ahu, Elmer Baysa, Michael Dimitrion, Roy Ebisu, Arnold Seid, Gildo Soriano, William McKenzie, Danilo Pelas,** and **Janice Smolec.** Members of the HMSA Health Plan Hawaii or the Community Health Program are eligible to see any one of the physicians in this association, according to HMSA spokesman Ray Norris.

Milton Trager has developed the Trager Psycho-physical Integration method, which uses gentle bodywork, mental imagery, and "Mentastics" to influence deep-seated patterns in the "bodymind" which inhibit, block, or distort free-flowing movements and full self-expression. Cathy Guadagno, founder of the San Diego Trager Center, will conduct a workshop in "Tragering" in Hilo sometime.

Alan Cooper, a California M.D., teaches a therapeutic relaxation and imagery workshop in West Hawaii which reverses many illnesses and anxieties, improves self-esteem, hope, motivation, and gives a sense of inner peace and internal strength. Cooper, who developed a serious illness while practicing at the Kaiser Medical Center in San Rafael, Calif., discovered self-healing and its physical and emotional benefits for himself, and developed workshops for more than 2,000 patients at the Kaiser Center there.

The following changes became effective January 1: The 37 million recipients of Old Age Disability and Survivor Benefits got a 3.5% boost in their checks. For the 120 million workers who are paying into Social Security, the tax rate rose to 7.05% from 1984's 6.7%; employers who paid 7% in 1984, now must pay 7.05%. The maximum earnings subject to tax rose $1,800 to $39,600. The Medicare hospital deductible rose from 1984's $356, to $400. The deductible was $304 in 1983. The monthly premium paid by enrollees in the optional Medicare Part B, which covers physician fees and other outpatient care, rose 6% from 1984's $14.60, to $15.50. Old-age pensioners who continue to work may earn more under the new regs, without losing part of their benefits. Those under age 65 may earn $5,400; those aged 65-69 may earn $7,320. Benefits are trimmed $1 for ever $2 earned over the limit. Those 70 and older have no limit on their earnings, but will be taxed on some of it.



"Did you HAVE to use roman numerals?"

Hors de Combat

Kihei Physicians' gynecologist **Allen Lawrence,** who has been the object of a picket line since he began performing abortions several months earlier, had set up a series of meetings in September to discuss ways to prevent unwanted pregnancy, especially in terms of sex education. Allen was interrupted by a man who drew a cross on the blackboard and told the panel of speakers — which included pastor Dan Meyer-Abbot, as well as Cassandra Wylie from the Sexual Assault Crisis Center, psychiatric social worker Myra Nemet — and others in the audience that they needed to repent. The man's aggressive behavior was matched by equal vehemence on the part of some in the audience and the meeting became a shouting match. That incident, plus matters relating to Medicaid payments (Allen feels that Medicaid defrauds physicians), must have made a lasting impression on him because Allen left Kihei several months later.

There are too many unwanted pregnancies occurring in the U.S. In 1980, there were more than 6 million pregnancies; 3.3 million were unplanned and unwanted. About half of these were terminated by legal abortion. Luella Klein, new president of the American College of Obstetricians and Gynecologists, feels that these figures are too high for an industrialized Western nation. She attributes the problem to the confusion and myths associated with current contraceptive measures. When the press reports on adverse side effects, the frequency of use of contraceptive measures drops dramatically. The figures on teen-age pregnancies are disheartening and Luella blames the "sexual climate" created by the media in general. She lays an equal amount of blame on the "conspiracy of silence" concerning preventive measures. Luella aptly points out: "Birth control costs much less than obstetrical care and going onto welfare rolls."

Senator Daniel Inouye has introduced a Health Care Protection Bill in the past sessions of Congress, the purpose of which is to provide uniform federal standards for a network of health-care malpractice screening panels across the nation. Inouye has reported that physicians are paying $1.7 billion in malpractice premiums. This adds $5 a day to a hospital room and $3 to $4 to each doctor visit. He reports that less than one-third of the premium costs goes to those injured by malpractice. It is predicted that if the malpractice system remains as it operates today, it could add as much as $7 billion to the nation's health-care costs in just a few years. James Sammons, AMA vice president, says: "The doctors may be writing the checks, but society is paying the costs." (Editorial in Maui News)

For the first time in its 18-year history, the cost of Medicaid for 1984 fell by 1.7%, whereas there had been 14% to 17% increases in 1981 to 1983. Medicaid administrator Earl Motooka attributes the decline to belt-tightening by hospitals and nursing homes because of Medicaid's new fee schedules. The decline also is attributed to a drop in the number of people eligible for Medicaid and a 10% cut in payments to doctors and other health providers. The annual report notes: The aged, blind, and disabled make up 16.2% of the recipients, but account for 55% of medical costs. Hospital and nursing-home care account for 67% of Medicaid costs. Physicians' services account for 14%.

More Sportsmen

Duncan McDonald, age 36, who was raised in Volcano before he went to medical school (his late father was the world-famous volcanologist), competed in the 3rd Volcano Wilderness Marathon and Rim Runs. He won the 10 mile Summit Caldera Run with a time of 58 minutes and 54 seconds.

Tom Nagel, a 1978 Ilikai Grand Prix circuit player, has completed his internship and is practicing aboard Hawaii's inter-Island "love boat," the S.S. Independence.

Tad Iwamura should be given the "Physician Golfer of the Year" award. During the past year he was won first place in the following tournaments: Tee off for humanity, City Bank tournament, Hemophilia tournament, Iolani tournament, and the KMC tournament.

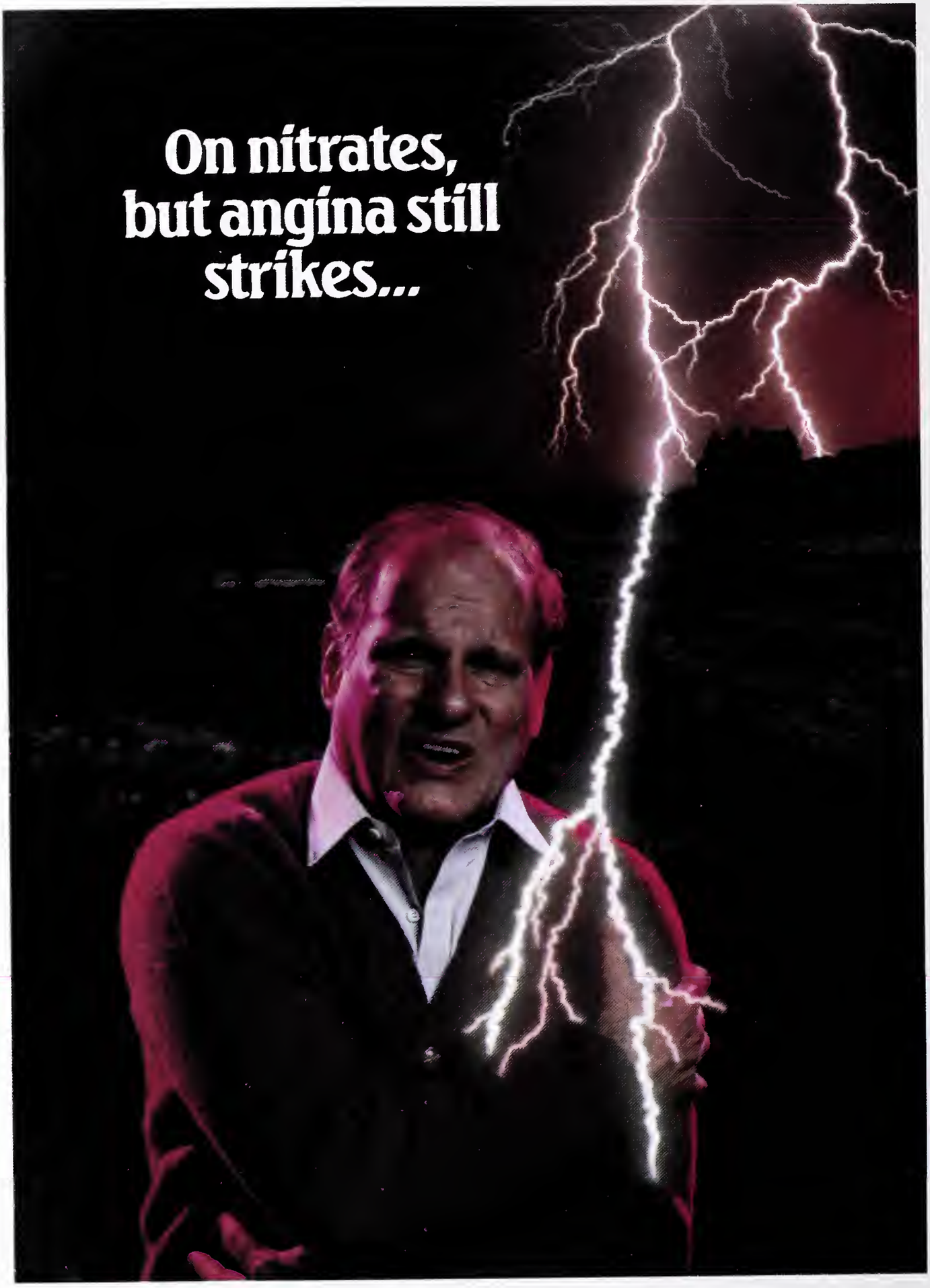
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Capsule of the HMA Council Meeting of February 1, 1985

- HMA subsidiary A&T Printing has been sold.
- The sale of HMA's Blackfield Building (its present home) is in the process — mainly because the Ward Estate will up the land lease to unacceptable heights; HMA will continue to occupy the space by renting from the new owner.
- We lost too much money at the annual meeting on Kauai: $7,000+; henceforth it will be structured to stay within a budget. Too few people attended the "Mash" party and the non-member registration was not up to expectations.
- A compendium of HMA policies is to be put into a manual.
- There are some 3,300 M.D.s in Hawaii of which 1,700+ have patient contacts, i.e. are practicing physicians; HMA's membership, overall, is ca. 1,500.
- Cal Sia is deep into HMA's doing something about the epidemic of child abuse.
- The Council is completely satisfied with Becky Kendro's status as *lobbyist par excellence* and doesn't need to hire an other person for the job (at a high price!).
- HMA supports a bill to ban smoking in most public places.
- The HoD recommended that the Council look into building up some financial reserves.
- Member recruitment dues incentive program is to continue throughout 1985.
- West Hawaii Medical Society, (30 members), elected Bob Laird, president; Ed Gramlich, v-p; and Scott Mandell, sec'y-treas.
- Ca. 500 Hawaii physicians are insured by MIEC, which will be changing its policies from Claims Occurrence to Claims Made in August. David Karp of MIEC will be visiting insured physicians and their office staffs "to advise" how records and office practice can be improved.
- Our compliments to Marilyn Lindsey for a very thorough recording of the Minutes — 4 pages, single-spaced — which are the "official" ones.



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MAY 1985
VOL. 44, NO. 5

Hawaii Medical Journal

CONTENTS

Editorial: 157
Learning the Ropes
J.I. Frederick Reppun, M.D.

Letters to the Editor 157
Re: Independent Medical Evaluation
Lawrence H. Gordon, M.D.
Re: Licensing Exams
Ben K. Azman, M.D.

Continuing Medical Education 161

HMA Auxiliary 162
Lila Johnson

Clinical Pathologist's Easy Chair: 164
Anemia
Francis H. Fukunaga, M.D.

Home Health Care Innovations in Health Care Delivery 166
Pauline G. Stitt, M.D., M.P.H.

News & Notes 169
Henry Yokoyama, M.D.

Book Review 170
Douglas G. Massey, M.D.

Preterm Delivery in Tourists 173
David Easa, M.D., Kenneth Ash, M.D., Rodney Boychuk, M.D., Greg Yim, Peter McNally, M.D., Thomas Kosasa, M.D.

Over the Editor's Desk 179
J.I.F. Reppun, M.D.

Liposuction 180
Bruce B. Chrisman, M.D.

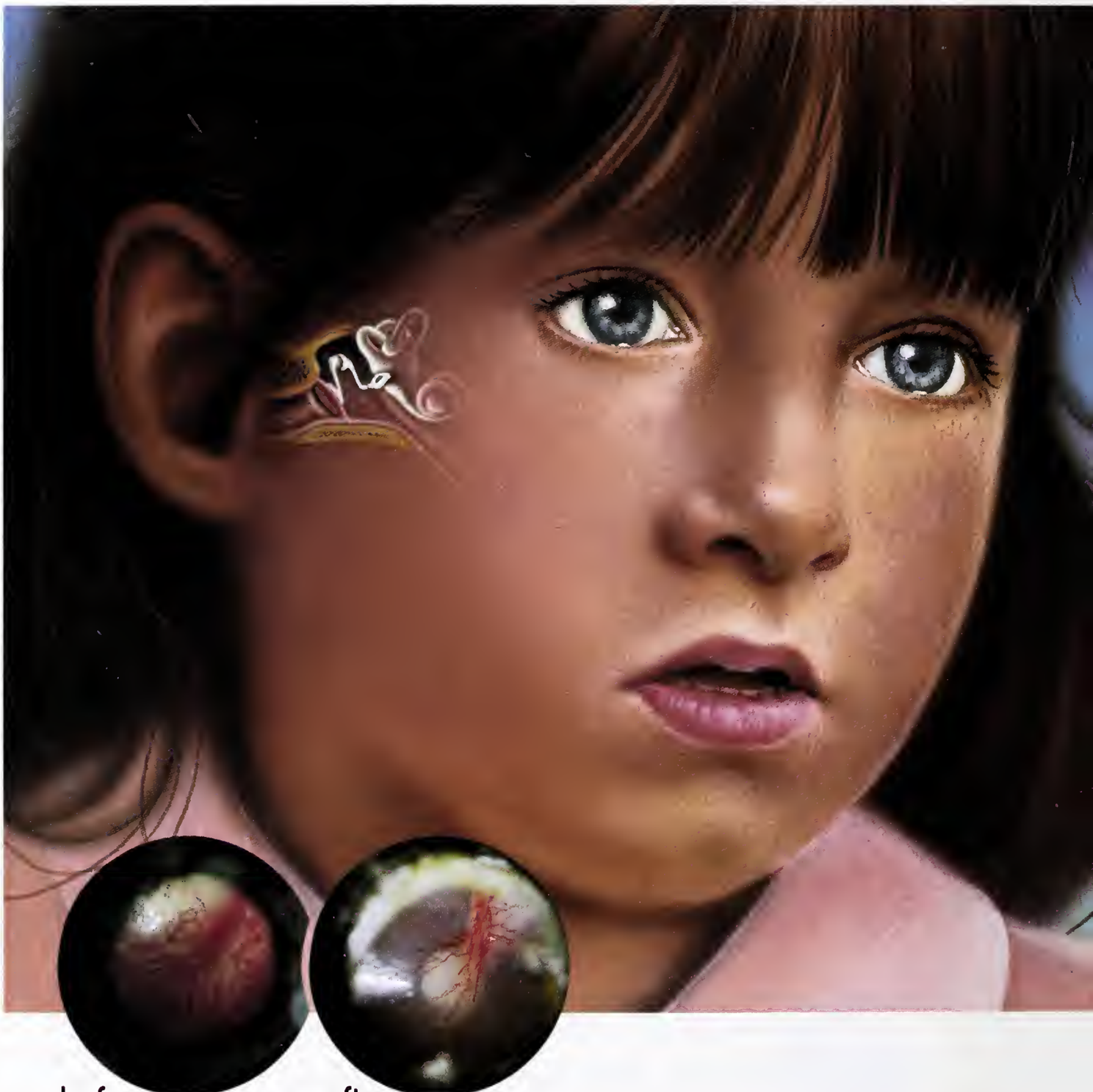
The Geographic Distribution of Rheumatic Fever in Hawaii 188
L.T. Chun, M.D., and Venu Reddy, M.D., M.P.H.

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Overall, 86% of *Haemophilus influenzae* strains taken from sputum cultures prove susceptible *in vitro* to Bactrim.[4] In one study, 100% of 191 ampicillin-resistant *H. influenzae* isolates were susceptible to Bactrim.[5] However, *in vitro* data do not necessarily correlate with clinical results.

Active against 91% of *S. pneumoniae in vitro*

In sputum cultures of *Streptococcus pneumoniae,* the most frequent pathogen in acute otitis media, 91% of isolates show susceptibility *in vitro* to Bactrim.[4]

Excellent clinical activity—and economical

In comparative clinical trials in children with acute otitis media, Bactrim *b.i.d.* was unsurpassed by ampicillin, amoxicillin or cefaclor.[6]
And the average cost of Bactrim is lower than that of cefaclor and comparable to that of ampicillin and amoxicillin.[7]
Bactrim is indicated in acute otitis media due to susceptible organisms when it offers an advantage over other antimicrobials. Bactrim is contraindicated in pregnancy, lactation, infants under two months of age and documented megaloblastic anemia due to folate deficiency. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age.

Cherry-flavored suspension

Bactrim™ Pediatric



(trimethoprim and sulfamethoxazole/Roche)

B.I.D. for enhanced compliance.

References: 1. Klimek JJ *et al: J Pediatr* 96:1087-1089, Jun 1980. **2.** Schwartz RH *et al: Rev Infect Dis 4*:514-516, Mar-Apr 1982. **3.** Cooper J, Inman JS, Dawson AF: *Practitioner 217*:804-809, Nov 1976. **4.** Antibiotic Sensitivity Report, Winter 1983. BAC-DATA Medical Information Systems, Inc. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Wormser GP, Keusch GT, Heel RC: *Drugs 24*:459-518, Dec 1982. **7.** *Med Lett Drugs Ther 23*:93-95, Oct 30, 1981

Please see summary of product information on the following page.

BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)
Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period, infants less than two months of age.
WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.
BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS:
General: Give with caution to patients with impaired renal or hepatic function, possible folate deficiency and severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur, frequently dose-related.
Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.
Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.
Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis:* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility:* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).** *Hematologic:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).
STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT.
STORE SUSPENSIONS AT 15°-30°C (59°-86°F) PROTECTED FROM LIGHT.

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Editorial

Learning the Ropes

There are people who perform, do their jobs so well, and become almost indispensable. Doris Jasinski, M.D., is such a person. She is resigning as managing editor of the JOURNAL after some 20 years of service.

Not only are such key people essential to the smooth operation of a business, an office, an organization, or a publication, but unfortunately their dedicated efforts often are taken for granted. No one really delves into the minutiae of "how it's done." Only when that person quits, retires, or dies, does it become shockingly apparent that a large void is created.

Since we have been nominated and then elected (by the House of Delegates) to the editorship of the HAWAII MEDICAL JOURNAL (the most apt simile is "like a lamb being led to slaughter"), we have discovered that the JOURNAL is like a clipper ship of old — a mess of stays, halyards, sheets, and hoists that make for a foggy maze through which a navigational course is difficult to pursue. The neophyte before-the-mast is overwhelmed, as are we!

There is the editing for scientific content; proofreading over and over again; editing for spelling, grammar, punctuation, and, above all, clarity of meaning; editing for graphic style and effect, large case versus small case, 1 column, 2 column, 3 column (sounds like that lilting canoe song!), positioning, pasting, cutting, dummying, etc. To top it off to the point of insanity, one must learn not only a new vocabulary but a whole new set of hieroglyphical shorthand which must pop quickly and naturally into an already full and wearied brain. Who was it that led us into this trap, we wonder, before blaming ourselves?

Doris did it all, finally putting this baby to bed in its crib (most recently the Crossroads Press) every single month, month after month. You readers probably never noticed how nice our JOURNAL looked, but Doris had a critical eye to it, ever striving to make it look even nicer so that it could hold its head high amid the plethora of other medical journals that flow across our desk tops.

After years of tireless work, Doris is tired. She wants to live her other life also; HMJ allowed her little time for that. She deserves the respite; she deserves her pasture. But she surely does leave a void that will be difficult to fill. Is there another journalist-physician among us?

First Harry Arnold Jr. left us and now Doris Jasinski. God help us all! The ship that is HMJ has an amateur as helmsman. He hasn't learned the ropes yet.

Readers, please have patience. A new crew is taking over, but the bosun's mates still are around, willing and eager to do some of Doris' jobs, an HMA cadre of Jennie, Becky, and Jennilyn. We are grateful for the continued support and assistance of Doug Massey and Henry Yokoyama. We can and will "learn the ropes."

LIFE IS SHORT
THE ART LONG
EXPERIMENT PERILOUS
*AND DECISION DIFFICULT**

J.I.F. Reppun, M.D.

*An aphorism engraved on the stone wall of the Harvard Medical School in Boston, for all in-coming medical neophytes to take to heart.



Re: Independent Medical Evaluation

Editor:

Dr. Calvin Kam's recent article on "The IME" is a valuable description of what is expected for an independent medical evaluation.

To be truly independent, however, the examining physician should have his receptionist, secretary, nurse, etc., make the appointment, with the understanding that a copy of the report will be forwarded to all parties concerned prior to review by the referring party. In other words, the referring party may not simply use the material if he wishes and discard it if he does not. Secondly, I believe it important to attempt to eliminate even the "appearance of a conflict of interests or prejudice" by avoiding any contact between the referring party and the physician himself, so that in fact the physician does not know who is responsible for the referral.

Finally, in some jurisdictions where the IME has been used, it is available at the request of the judge or either party in a legal process and the examiner is picked at random from a group of physicians listed by the Medical Society as willing to perform such examinations. To preclude an unusual conflict between the referring party and one or another physician, the parties involved may arbitrarily have the ability to eliminate the assigned physician on a one-time-only basis, so that if he felt uncomfortable with a specific individual he would at least have a second option. In these circumstances, the independent medical examiner in fact is called by the court to testify and while each party might have his own expert subsequently called this independent examiner tends to have considerably more weight than the experts chosen by the opposing parties.

In the jurisdictions where the true independent medical examiner has been used for judicial preceedings, there has been a significant increase in pre-trial settlements. I would encourage the Medical Society to attempt to develop this type of system in the state of Hawaii.

Lawrence H. Gordon, M.D.
Orthopedic Associates of Hawaii, Inc.

Re: Licensing Exams

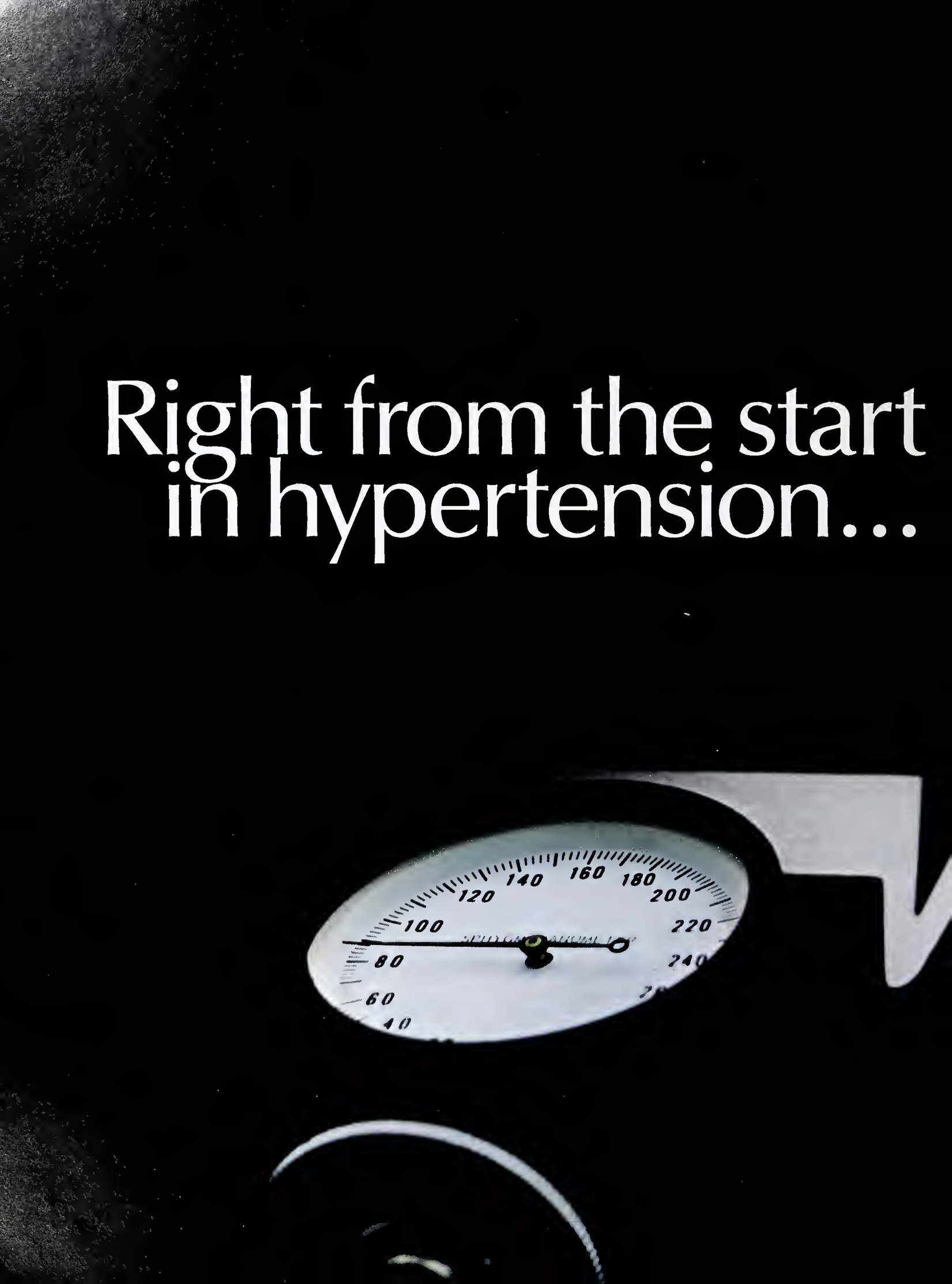
Editor:

In response to Dr. Thomas Au's editorial in the November edition of the HAWAII MEDICAL JOURNAL, I wish to point out that during my tenure as chairman of the Board of Medical Examiners, the board at its meetings has on more than one occasion gone on record that it supports keeping the examinations of the National Board of Medical Examiners as one pathway to state licensure.

Dr. Au's mistaken impression could have been avoided if he had spoken with me or with any of the members serving on the board.

Ben K. Azman, M.D.
Chairman
Board of Medical Examiners

Right from the start in hypertension...





Once-daily INDERAL LA (propranolol HCl) for smooth blood pressure control without the potassium problems of diuretics

Once-daily INDERAL LA (propranolol HCl) avoids the risk of diuretic-induced ECG abnormalities due to hypokalemia.[1,2] In addition, INDERAL LA preserves potassium balance without additive agents or supplements while providing simple, well-tolerated therapy with broad cardiovascular benefits.

Once-daily INDERAL LA for the cardiovascular benefits of the world's leading beta blocker

Simply start with 80 mg once daily. Dosage may be increased to 120 mg to 160 mg once daily as needed to achieve additional control.

Like conventional INDERAL tablets, INDERAL LA should not be used in the presence of congestive heart failure, sinus bradycardia, heart block greater than first degree, and bronchial asthma.

For beta-1/beta-2 blockade

Once-daily

INDERAL® LA

(PROPRANOLOL HCl) LONG ACTING CAPSULES

80 mg 120 mg 160 mg

The appearance of these capsules is a registered trademark of Ayerst Laboratories.

Please see brief summary of prescribing information on the next page for further details.

Once-daily
For beta-1/beta-2 blockade INDERAL® LA
(PROPRANOLOL HCl) LONG ACTING CAPSULES



The appearance of these capsules is a registered trademark of Ayerst Laboratories

BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of symoathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure; intensification of AV block; hypotension; paresthesia of hands; thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place; short-term memory loss; emotional lability; slightly clouded sensorium; and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

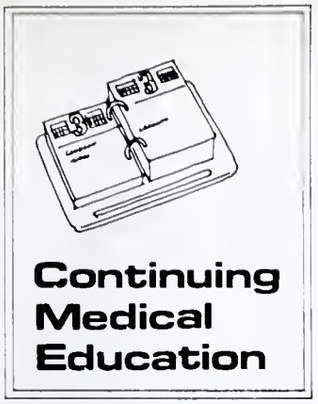
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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS ONGOING

For a complete list of ongoing programs, please refer to the March 1985 issue of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

May 1-4, 1985	American Pediatric Surgical Association Annual Meeting, Walton Shim, M.D., 1319 Punahou Street, Suite 1000, Honolulu, Hawaii 96826, (808) 947-2611. Location: Sheraton Waikoloa, Big Island of Hawaii.
May 3-6, 1985	Timely Topics in Pediatrics, American Academy of Pediatrics, Hawaii Chapter, Joseph Young, M.D., 1507 South King Street, Honolulu, Hawaii 96826. Location: Kona Surf Resort, Big Island of Hawaii.
May 5-11, 1985	12th Hawaiian Seminar on Clinical Anesthesia, Educational Programs Division of the California Society of Anesthesiologists, (415) 348-1407. Location: Sheraton Kauai Hotel, Poipu Beach.
May 6-9, 1985	Clinical Gerontology, University of California, Irvine, College of Medicine and Institute for Medical Studies, (714) 495-4499. Location: Maui.
May 19-22, 1985	Radiologists' Business Managers Association, Dene Murray Management, 400 North Michigan Avenue, Suite 1110, Chicago, Ill. 60611 (312) 661-1757. Location: Hilton Hawaiian Village.
May 19-25, 1985	4th Annual Spring Diagnostic Ultrasound Conference, Post-Conference Seminar, Los Angeles Radiological Society, CE Committee, (213) 642-0921. Location: Turtle Bay Hilton, Oahu.
May 26, 1985	Lederle Symposium-Preventive Medicine: Nutritional Aspects, HMA, 320 Ward Avenue, Suite 200, Honolulu, Hawaii, (808) 536-7702. Location: The Westin Ilikai Hotel, Honolulu.
May 25-31, 1985	Marine Medicine: The Pacific Basic, Adventure Medical Seminars, Wilderness Medical Society, (503) 482-0667. Location: Lahaina, Maui.
June 6-9, 1985	Physicians' Financial Planning: Practical Approaches, Audio Visual Medical Marketing, 404 Park Avenue South, New York, N.Y. 10016, (800) 221-3995. Travel agent: Travel Committee of New York City, (800) 492-2203 or (800) 433-1790. Category II credit. Location: Hyatt Regency Maui.
June 22-26, 1985	National Association of Rehabilitation Facilities, P.O. Drawer 17675, Washington, D.C. 20041, (703) 556-8848. Location: Hawaiian Regent Hotel.
June 22-26, 1985	Association of Medical Rehabilitation Directors and Coordinators, Inc., 87 Elm Street, Framingham, Mass. 01707, (617) 877-0517. Location: Hawaiian Regent, Honolulu.
July 2-6, 1985	International Society of Radiographers and Radiological Technologists (ISRRT), Stoneystack, Woodland Way, Weybridge, Surrey KT13 9SW United Kingdom, Mr. Vaithilingam. Location: Hilton Hawaiian Village, Honolulu.
July 8-12, 1985	International Congress on Radiology, Hawaii Radiology Congress, Sue O'Malley. Travel agent: Passport Travel, 6340 Glenwood, Clover Leaf, Bldg. 7, Overland Park, Kansas 66202. Location: The Westin Ilikai Hotel, Honolulu.
July 13-20, 1985	Cardiovascular Medicine and Surgery, Stanford University Medical Center, Office of Postgraduate Medical Education, Room TC 129, Stanford, Calif. 94305, (415) 497-5594. Location: The Mauna Kea Beach Hotel, Big Island of Hawaii.
July 19-26, 1985	The First Annual Alaska Hawaii Seminar — The Restructuring of Medicine, Pacific Health Research Institute, Thomas Square Centre, 846 S. Hotel Street, Suite 303, Honolulu, Hawaii 96813, (808) 524-4411, Wally M. Izumigawa. Location: Prince of Wales Island, Alaska.
July 24-26, 1985	Strategic Therapy, Kahi Mohala Healthcare Learning Institute, P.O. Box 11358, Ewa Beach, Hawaii 96706, (808) 671-8511, Dana Zichittella. Location: Hawaiian Regent Hotel, Honolulu.
Aug. 5-9, 1985	ECG Interpretation and Arrhythmia Management, International Medical Education Corporation, 64 Inverness Drive East, Englewood, Colo. 80112, (800) 525-8651, Beverly Jacobsen. Location: Honolulu.
Aug. 9-13, 1985	Advances in Internal Medicine, American College of Physicians, (800) 523-1546. Location: Stouffer's Wailea Beach Hotel, Maui.
Aug. 9-18, 1985	Conference on Clinical Anesthesia, Educational Programs Division of the California Society of Anesthesiologists, (415) 348-1407. Location: Maui.
Aug. 10-17, 1985	Ophthalmology, USC School of Medicine, Postgraduate Division, 2025 Zonal Ave., KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929 (CA), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa Street, Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511 (CA), (213) 746-1384. Location: Mauna Kea Beach Hotel, Big Island of Hawaii.

(Continued on page 162)

HMA Auxiliary

PSAs On The Elderly

The HMA Auxiliary is purchasing new public service announcements (PSAs) which promote the positive aspects of aging. The PSAs, which have been produced by the AMA, convey the themes: "Share the experience of a lifetime" and "Just because you're 65, don't retire from life." Look for them on our local television and radio stations.

Buttons and posters which reflect the theme of the PSAs are available from the HMA Auxiliary. Call Lila Johnson (HMAA president) at 373-9323 with your request.

HMAA Auxiliary Council Meeting in Hilo

The HMAA Auxiliary Council met in Hilo on March 7, 1985, in conjunction with the Hawaii County Auxiliary's general membership meeting. The issue of child abuse prevention is receiving much attention and action from the county auxiliaries. Hawaii County's membership heard a presentation from the Hilo Family Support Service. Honolulu County's board recently approved a position statement on child abuse and subsequently sent testimony to the legislature in support of the Children's Trust Fund.



AUXILIARY COUNCIL Left to Right: Gwen Fu, Maui (Vice President-Administration), Emily Callan, Honolulu (Vice President-Finance), Kathy Oldfather, Hawaii (Vice President-Secretarial Matters), Joyce Chuang, Kauai (Vice President-Historical Matters), seated: Lila Johnson, Honolulu (President).

Continuing Medical Education

(Continued from page 161)

Aug. 10-21, 1985	28th Annual Hawaii Refresher, USC School of Medicine Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929 (Calif.), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa Street, Suite 217, Los Angeles, Calif. (90007), (800) 821-5094, (800) 521-6511 (Calif.), (213) 746-1384. Location: Sheraton Waikiki and the Maui Marriott.
Aug. 16-19, 1985	Neuropsychological Testing: A Workshop on Application, Techniques, and Indications, Southern California Neuropsychiatric Institute, (619) 454-2102. Location: Poipu Beach, Kauai.
Aug. 21-31, 1985	Financial Management, Tax Planning, and Estate Planning, Physicians' Seminar Services, (714) 787-8580. Location: Honolulu.
Aug. 25-28, 1985	Aging: Neuropsychiatric Considerations XII Annual Symposium, Southern California Neuropsychiatric Institute. Location: Mauna Kea Beach Hotel, Big Island of Hawaii.
Aug. 28-Sept. 1, 1985	Controversies in Urology, American Urological Association, (713) 791-1470. Location: Sheraton Waikiki.
Sept. 9-13, 1985	First Annual Masters International Diagnostic Radiology Conference, Maurice Reeder, M.D., 1356 Lusitana Street, Suite 502, Honolulu, Hawaii 96813, (808) 531-6471. Location: Baden Baden, West Germany.
Sept. 25-29, 1985	Association of American Physicians and Surgeons, Inc., 5201 Lyngate Circle, Burke, Va. 22015, Sue Ackley, (703) 425-6300. Location: Maui, Hotel Inter-Continental.
Sept. 28-29, 1985	First Responders Treatment of Burn Patients, Straub Clinic & Hospital, 888 Souh King Street, Honolulu, Hawaii 96813, Joan White, (808) 523-2311. Location: Honolulu.
Sept. 29-Oct. 4, 1985	Symposium on the Prevention of Osteoporosis, Conference Coordinator, Osteoporosis Center, Kuakini Medical Center, 347 North Kuakini Street, Honolulu, Hawaii 96817, (808) 547-9578. Location: Ilikai Hotel, Honolulu.
Sept. 29-Oct. 4, 1985	Congress of Neurological Surgeons, University of Maryland Hospital, 22 South Green, Baltimore, Md. 21201, Michael Saleman, M.D., (301) 528-2905. Location: Sheraton Waikiki.
Sept. 30-Oct. 2, 1985	Hawaii Symposium on Osteoporosis, The Osteoporosis Center, Kuakini Medical Center, 347 North Kuakini Street, Honolulu, Hawaii 96817, (808) 547-9578. Location: Ilikai Hotel, Honolulu.
Oct. 12-14, 1985	129th Annual Scientific Meeting, Hawaii Medical Association, Jennie Asato, HMA, 320 Ward Avenue, Suite 200, Honolulu, Hawaii 96815, (808) 536-7702. Location: Kona Surf Resort, Big Island of Hawaii.
Oct. 13-18, 1985	American Health Care Association, 1200 15th St., N.W. Washington, D.C. 20005, Sherri Massey, (202) 833-2050. Location: Hilton Hawaiian Village, Honolulu.
Oct. 15-18, 1985	American Medical Directors Association, P.O. Box 2098, Macon, Ga. 31203, Joy Hulgan, (912) 745-9880. Location: Honolulu.
Nov. 1-2, 1985	Cost/Quality Assurance Issues in Medicine Today, Straub Clinic & Hospital, 888 South King Street, Honolulu, Hawaii 96813, Joan White, (808) 523-2311. Location: Honolulu.
Nov. 5-8, 1985	Natural Immunity Conference, Baldwin H. Tom, Ph.D., The University of Texas Health Science Center at Houston, Dept. of Surgery, Division of Immunology and Organ Transplantation, 6431 Fannin, MSMB 6.240, Houston, Texas 77030, (713) 792-5670. Location: Undecided, probably Maui.
Nov. 18-20, 1985	Hawaii Pediatric Gastroenterology Conference, Delia Chang, Continuing Medical Education, 1319 Punahou Street, Suite 816, Honolulu, Hawaii 96826, (808) 948-6949. Location: Kapiolani Women's & Children's Medical Center, Honolulu.

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Clinical Pathologist's Easy Chair

Francis H. Fukunaga, M.D.

Anemia

Anemia is not a disease but a signal that something is wrong. It can be the presenting manifestation of a disorder of any organ. Mild degrees of anemia never should be neglected because it may be the first sign of a bleeding ulcer, carcinoma of the colon, or some other serious disease. Abnormal laboratory results frequently are ignored or overlooked and as many as 16% of abnormal hemoglobins are missed despite the use of chart reminders.[1]

The anemias can be conveniently categorized into four groups: iron deficiency, hemolytic, megaloblastic, and bone marrow failure. The marrow failure group may be absolute due to aplasia, infiltration by a primary or secondary malignancy or ineffective red cell production seen in refractory normoblastic anemia or relative marrow failure due to a chronic disease such as chronic infections, renal failure, and liver disease. The anemias also have been classified by the MCV and RDW.[2]

The RDW, or red cell distribution width, is a measure of the red cell size distribution and is equivalent to "anisocytosis" in the peripheral blood smears. The RDW is calculated as the coefficient of variation of red cell volume distribution.

Iron deficiency anemia is one of the most common health problems. A normal adult male and non-menstruating woman may lose about 1 mg of iron each day via the loss of epithelial cells in the G.I. tract and the diet must contain about 10 mg of iron to compensate for this loss. There are about 6 mg of iron in each 1,000 calories of food and it is most unusual to be iron-deficient because of a poor diet.[3]

Menstruating women lose an average of about 40 ml each menstrual cycle and may require about 20 mg of iron each day to maintain a normal iron balance. There also is increased demand for iron during infancy, adolescence, pregnancy, and lactation. Unless there is an obvious cause, iron deficiency must be considered the result of bleeding.

The typical case of iron deficiency anemia will show a low MCV that is not as severe as in thalassemia. The peripheral blood smears show microcytosis and hypochromia, but may not in as many as 50% of cases. The serum iron is low, the TIBC is high, and the saturation is usually less than 15%. The serum iron and TIBC will be decreased in chronic diseases such as rheumatoid arthritis and the iron stores evaluation may require a bone marrow examination stained for iron. The serum ferritin level determination may be helpful if decreased. It is decreased in iron deficiency, but may be normal if the deficiency is in a patient who has a chronic infection, liver disease, or a malignancy.

Hemolytic anemia is due to the premature death of the red cells as a result of intracorporeal or extracorporeal causes. The major differential diagnosis is bleeding. Hemolysis results in binding of haptoglobin to cause decreased serum levels. If the compensating mechanisms are overtaxed, the excess serum hemoglobin is excreted in the urine where some become hemosiderin. In the immune hemolytic anemias due to antibody destruction of red cells, the Coomb's test against complement and IgC will be positive. If negative, the hemolysis due to a non-immune process should be investigated. These include the hemoglobinopathies, enzymopathies such as glucose 6 phosphate dehydrogenase and pyruvate kinase deficiencies, hereditary spherocytosis, cold agglutinins, and damage to red cells by abnormal heart valves and blood vessels known as microangiopathic hemolysis. Isotope scans may show an enlarged although non-palpable spleen.

The megaloblastic anemias are secondary to deficiencies of vitamin B-12 or folic acid. The peripheral blood shows macrocytosis, anisocytosis, poikilocytosis along with hypersegmentation of neutrophiles. Pernicious anemia is due to an autoimmune disease of the stomach where antibodies to the parietal cells and intrinsic factor lead to malabsorption of vitamin B-12. Folic acid deficiency is common to alcoholics, in elderly people on inadequate diets, during pregnancy and lactation, and patients on hemodialysis. The MCV is an important clue in the evaluation of megaloblastic anemia. Elevated MCV may occur even before there is anemia. However, megaloblastic anemia may occur with a normal MCV if there is an associated iron deficiency or thalassemia. The serum vitamin B-12 levels are decreased in pernicious anemia, but also may be decreased in pregnancy, with oral contraceptive intake, myeloma, transcobalamine I deficiency, and in folic acid deficiency. The Schilling test measures the absorption of radioactive B-12 before and again after intake of intrinsic factor. Antibodies to the intrinsic factor are seen in about 50% of the pernicious anemia patients.

Pancytopenia suggests an infiltative process in the bone marrow such as multiple myeloma, lymphomas, leukemias, myelofibrosis, and metastatic carcinomas. Bone isotope scans may demonstrate areas of fibrosis and metastatic tumor.

The critical clues in the evaluation of anemia often come from a good history and physical examination. A family history of anemia may be due to a hemoglobinopathy; heavy menses would suggest iron deficiency and gastric resection may lead to a megaloblastic anemia about 15 years after surgery. Helpful early laboratory hints in the evaluation of anemias come from the MCV, reticulocyte count, and the red blood cells morphology.

A microcytic hypochromic anemia (MCV less than 80 and MCHC less than 32.5) is commonly the result of iron deficiency or thalassemia. Follow-up studies should include serum iron and TIBC and hemoglobin electrophoresis. Macrocytic anemia with normal reticulocyte count should be tested for vitamin B-12 and folic acid.

A persistent reticulocytosis of 10% to 20% suggests an hemolytic process and usually is higher in the autoimmune group. There is usually hyperbilirubinemia, depletion of the serum haptoglobins, hemoglobinemia, hemoglobinuria, and hemosiderinuria. The immune type of hemolytic anemias also have a positive antiglobulin (Coomb's) reaction. A normal reticulocyte count with normal platelets suggests an iron deficiency anemia or anemia due to a chronic disease. The serum iron is low and TIBC high in iron deficiency. If the iron and TIBC are normal or low, a chemistry profile should show abnormalities of the kidney, liver, protein, or thyroid gland. An abnormal protein level would suggest need for a serum protein electrophoresis and, if required, a bone marrow aspirate to rule out multiple myeloma.

Examination of the peripheral blood smears are helpful in the evaluation of anemias. The presence of spherocytes, sickle cells, and ovalocytes may be diagnostic. Target cells are common in some hemoglobinopathies such as hemoglobin C and E disorders. Basophilic stippling may indicate lead poisoning and thalassemia trait. Schistocytes such as helmet cells and contracted cells suggest a mechanical damage to the red blood cells as in damage due to artificial heart valves. Howell-Jolley bodies are nuclear fragments present in the red cells and they are present after splenectomy and some cases of megaloblastic anemia.

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1. Wigton RS et al.: Chart reminders in the diagnosis of anemia. *JAMA* 1981, 245:1745-1747.
2. Bessman JD et al.: Improved classification of anemias by MCV and RDW. *Amer. J. Clin. Path.* 1983, 80:322-326.
3. Steinberg D: Anemia — a clinical perspective. *Clin. Biochem.* 1984, 17:89-94.

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Home Health Care Innovations in Health Care Delivery

Pauline G. Stitt, M.D., M.P.H.*

• *Having been invited to consider home care in the context of innovations in financing and health care delivery, I plunge right into definitions. As "home care," we are not speaking of roofing, plumbing, or other aspects of housing, but refer to domiciliary health care — health care delivery at home. Sometimes, as a side value, such care not only helps the patient but keeps the home itself intact and functioning.*

My dictionary says that "to innovate," is "to start, renew, make a fresh start." I add that time and again in our lives "home is where the start is." Home is a natural "locus of focus" for innovation. Home is not only where we usually start and end each day, but it is where life as a whole often starts, and, from then on, seeks refreshment, repair, and renewal.

As for financing, all innovation in health care is linked to realities of resources — funds, facilities, and personnel. Financing is the prudent use of what you have — prudent use for appropriate purpose.

Every step of innovation involves financing, and the primary financial need is to get full quality for funding.

Innovation sounds great, but like many forms of greatness it may be "thrust" upon us. Consider the current demands for DRGs classifying care and length of hospital stay by Diagnostically Related Groups. These new pressures may lead us to innovate new approaches to home care.

One innovation invites another. When home care expands, new patterns of care emerge, and there is increasing need for cross-professional training in how to deliver health care at home.

Hawaii has the ingredients for such innovations. There are certain well-established home-care services, and there is a university with a medical school, a school of nursing, a school of social work, and a school of public health. Combining these two sets of resources, there are potentials for developing a joint practicum, in the form of shared field training for people who will be delivering health care at home.

"A house is not a home" and home care is more than house calls, by whatever discipline(s). Home care reaches a human being where he lives. It reaches him in his natural habitat, as part of whatever family he has — or lacks.

When care gets to a home, it reaches the family unit, even if that is a unit of one.

When home care is appropriate it can be excellent. When it is inappropriate, it can be a fiasco. At its best, it is the right sort of care for the right sorts of patients at the right time. It must not be makeshift or second-rate, and, above all, it must not be used as an extrusion process to dislodge patients who need hospital care.

Quality home care starts with selection of patients, and that selection requires judgment. That judgment is enhanced by perceptions of more than one discipline. The physician has criteria he uses for situations he thinks might be served at home. Nursing colleagues may alert him that some selections would not be feasible from the nursing standpoint. They know, from a vast body of visiting-nursing experience, that not all nursing techniques are interchangeable between hospital and home. A social worker often brings knowledge of home situations which determine whether the family can cope with the patient's care without damage to other family members.

Home care is often presented as an economy measure. In the face of today's hospital costs, home care can be less expensive than health care elsewhere. But even when there is little financial difference, home care often provides side benefits to the patient and family that make it cost-effective.

The value of shared field experience for health workers in practice or in training is beyond measure. These specialists see the real-life impact of illness and disability on a person and his family, and they learn to work together to help that patient and family cope.

Modern health workers are taught that there are four dimensions to health-care: treatment, prevention, health maintenance, and health furtherance. Treatment consists of appropriate care of existing problems. Prevention recognizes that nothing is so bad that it can't get worse, and that preventive care (secondary prevention) can often keep that "worse" from happening. Health maintenance preserves whatever strengths still exist. And health furtherance tries to improve those strengths, and whatever else can be made better than it is. All four dimensions enter into a home care program.

Home Care — Who Needs It?

From birth to death — and even before birth and after bereavement — every age group of life has been seen to benefit from home care suitable for their special needs.

Not all home care serves all groups or all needs. There are various patterns. The home care role in geriatrics is well known. Pediatric home care for selected conditions is well-developed in some parts of Canada, the United States, and elsewhere. Post-partum and newborn care long have been gratifying parts of public health nursing. Today, brief, strengthening support to bereaved household members also is proving useful.

Domiciliary care helps in convalescence, post-surgical recovery, and many other medical, surgery, or neurological situations. Among the most satisfactory programs are those with a general rather than strictly categorical coverage.

Programs vary from a single discipline — such as one visiting nurse — to a trio, quartet, or full orchestra of talents.

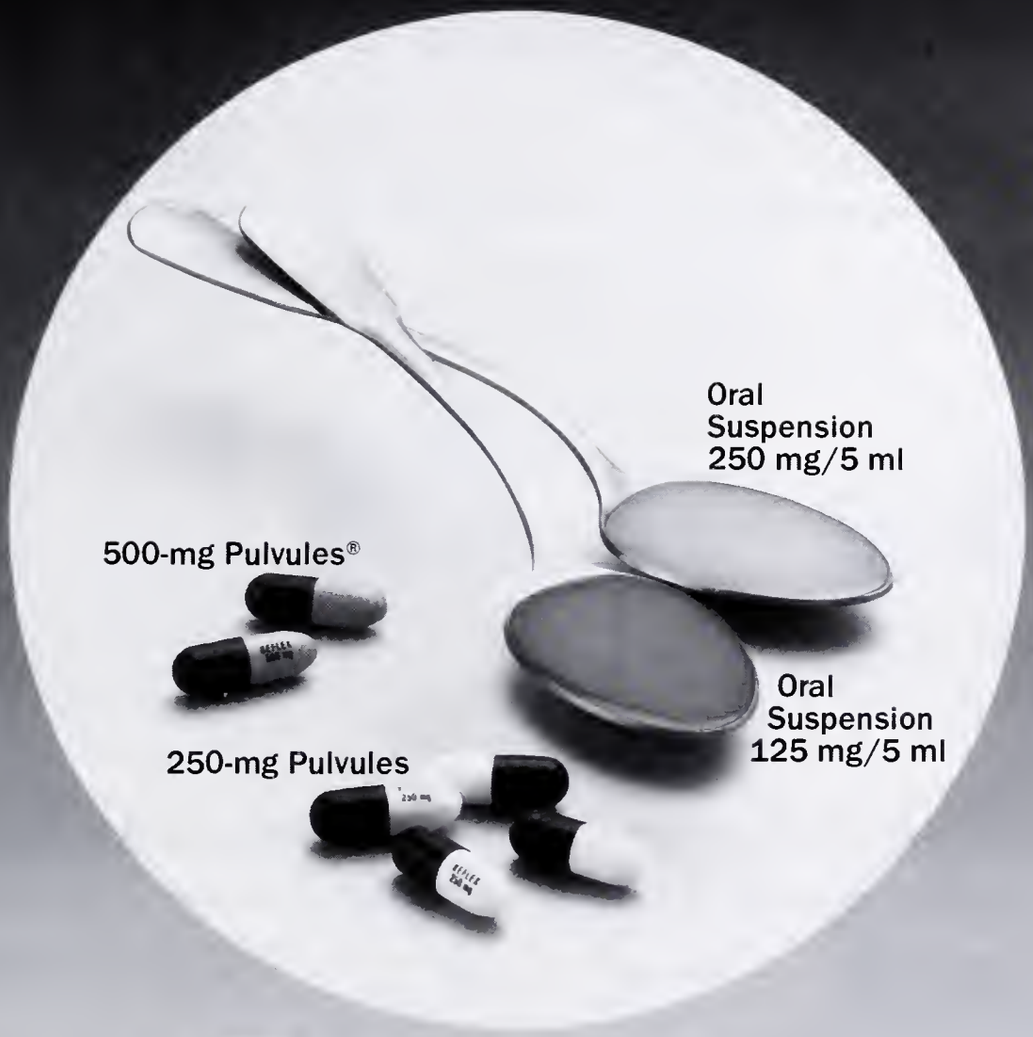
Disciplines may include medicine, social work, physical therapy, occupational therapy, nutrition, respiratory therapy, speech therapy, homemaker services, home health aides, or other skills as indicated. Composition of a team depends

Based on paper presented at the Hawaii Public Health Association's annual meeting, "Shaping Hawaii's Health Agenda," held in May 1984.

*Professor of public health (emeritus), University of Hawaii School of Public Health. Former chief of the Home Health Service at Boston University Medical School, and former chief of Home Health Services, U.S. Public Health Service.

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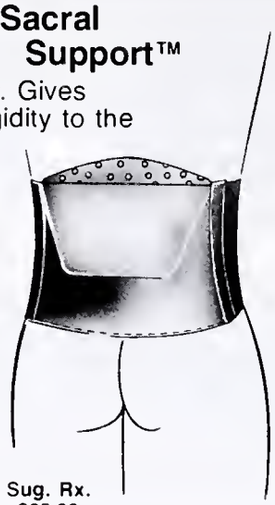
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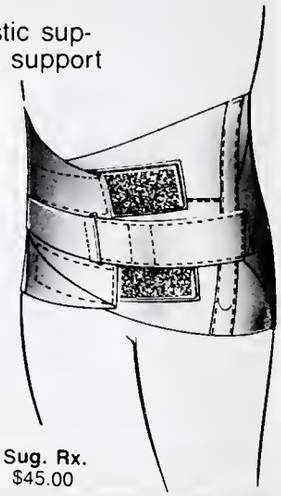
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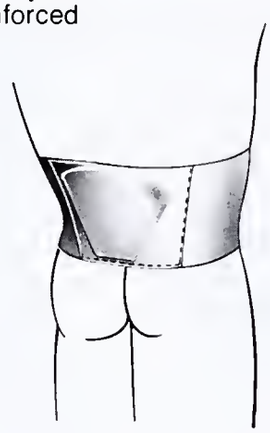
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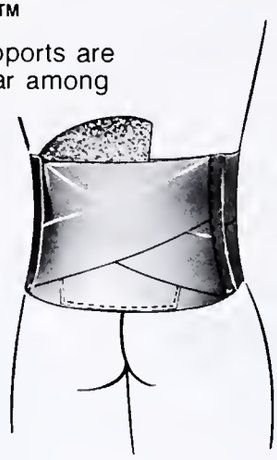
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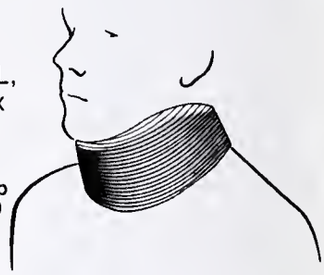
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on existing needs and available resources.

The most significant contributions come from people who know how to work together. The participants bring out the best in themselves and in each other. The teams themselves become more effective than the sum of their members' separate contributions.

The crux of teamwork is learning to work together, and this points to needed innovation.

Today, Hawaii's most-needed innovation in home care is for shared field-training, a shared practicum for the various workers who comprise a home care team. There is need for a shared operation involving the schools of medicine, nursing and social work, with other types of workers included as needed, and as availability allows.

The type of field experience needed is actual "hands-on" acquaintance with health care at home, plus related case conferences.

The essence of such case conferences is that patients in the midst of home settings are evaluated, served, and re-evaluated through coordinated efforts of a team. Each worker does his own thing in his own way, but is constantly strengthened by insights gained from fellow workers.

Home care programs can provide a setting for such field experience. Patterns have developed at Boston University Medical School, Tufts Medical School, McGill, Stanford, and elsewhere. But there is need for current research and innovation in this special form of health care delivery and for professional education. Hawaii has the ingredients.

Hawaii Programs

Hawaii already has home care resources and potentials for research and innovations in joint field training.

The St. Francis Hospital Home Care program serves all age groups, and many phases of health care delivery, reaches more than 2,000 patients a year, and is expanding caseload and content of services. Home care is available before and after surgery, before and after hospital discharge, before and during hospice care, and before and during dialysis. The hospital and home care program recognize the importance of pre-service and inservice training for professionals and paraprofessionals who will be working together.

Another local resource is the Upjohn Home Health Agency, part of Upjohn Healthcare Services. They provide "intermittent health care" in the home. The patient's physician directs and supervises the care of individual patients. Services are planned and delivered in conjunction with a team of skilled, licensed professionals. These teams include registered nurses, physical therapists, occupational therapists, speech therapists, a medical social worker, and home health aides. They help the patient and family with instruction, treatments, and support. The agency also coordinates supplies, equipment, and community resources, and makes home visits anywhere on Oahu. They also provide elements of pre-service or inservice experience for people likely to serve patients at home.

Straub Clinic's Home Care activities constitute another service and teaching resource, and so does Community Care, the special program at the Queen's Medical Center. That program places an individual patient within an individual family, and then provides medical, nursing, social work, and other supports to make the placement workable.

Summary

Home care is domiciliary health care for people who neither need, nor would be appropriately served, by hospital care, but who, nevertheless, do need skilled home health care to cope with their medical problems at home. Such care requires multiple skills, especially skills of working together. Hawaii has services and training resources that present possibilities for needed research and innovation in these areas.

ACKNOWLEDGEMENTS

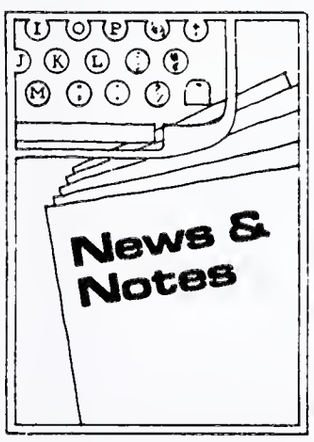
The writer expresses appreciation for information and counsel received from:

Sister Maureen, Executive Officer, St. Francis Hospital, 2230 Liliha Street, Honolulu, Hawaii 96817.

Rose Ann Poyzer, R.N., Administrator, Home Health Agency Upjohn Health Care Services, 210 Ward Avenue, Suite 127, Honolulu, Hawaii 96814.

Celia Moss Hailperin, A.C.S.W., 4140 Black Point Road, Honolulu, Hawaii 96816. Editor of "Hospital Services for the Child at Home," and former project director of a 5-year Home Care Demonstration in the Home Care Department, Montefiore Hospital Association of Western Pennsylvania, Pittsburgh, Pa.

Susie Anderson, director and illustrator, University of Hawaii Health Instructional Resources Unit (HIRU), Biomedical Sciences Bldg., Resources Unit (HIRU), Biomedical Research Bldg., 1960 East-West Road, Honolulu, Hawaii 96822, for visual aids and helpful advice.



Professional Moves

It has been some time since we wrote this segment of the News & Notes, and our column may no longer be quite current because of a 40-day lead time required for publication. This means anything we submit can be 2- or 3-months-old when appearing in print. Yet the professional moves of our colleagues is important news. So, lest we lose track of our fellow physicians, and with apologies to all those physicians whom we failed to mention in the interim 3 years, we shall start anew with those who opened their offices in January this year.

With the new year, FP **Izumi Kobashigawa** opened his office at 321 N. Kuakini, Room 310; and another FP, **Lloyd Kobayashi**, associated with **Paul Lin** at 98-211 Pali Momi Street, Suite 830 (as the Aiea Family Medicine, Inc.). Internist-gastroenterologist **Ronald Pang** has two offices: St. Francis Medical Office Building, Suite 303, and Aiea Medical Building, Suite 305; internist-FP **Timothy Ahu**, who is associated with **Arnold Seid** and **Elmer Baysa**, opened his office at the Aiea Medical Building, Suite 505; internist **Chiyome Fukino** also has two locations, Aiea Medical Building, Suite 305, and St. Francis Medical Office Building, Suite 305; internist **Daphne Myers** associated with the Fronk Clinic, Inc. Pediatrician **Dwight Matsumura** assumed the practice of **Robert Dinler** at 333 Uluniu Street, Kailua. On Maui, internist **Reginald Buesa**, born and raised on Maui, returned to open a family practice as Kihei Physicians in the Kihei Professional Plaza. Reginald will be assuming Dettloff's practice. Once again, our sincere apologies to all those physicians who have moved, retired, or opened new offices in the past 2 or 3 years whom we have inadvertently failed to list.

We meant to start as of January this year, but we cannot properly ignore the few announcements from 1984 which we have on file. **Bill Goebert**, neurosurgeon-lawyer who was with Straub before he went to law school and who was with Kaiser after getting his law degree, has opened his office in the Kailua Professional-Center II; plastic surgeon **F. Don Parsa**, M.D., Inc., joined **Bennett Lau**, M.D., Inc., at 1380 Lusitana Street, Suite 702; rheumatologist **Mary Ann Antonelli** opened her office in the Kailua Professional Center Bldg., 30 Aulike Street, Suite 301; internist **Dukee Kim** relocated from Suite 1111 to Suite 416, Ala Moana Building; internist **Michael Inada** joined the Fronk Clinic, Inc., and cardiologist **Roy Nagle** joined **Morton E. Berk** at Kealakekua Post Office Building on the Big Island; Mort had retired from the Honolulu Medical Group only to be busier than ever in Kona. Internist **Aaron Kaichi** opened his office at 94-873 Farrington Highway, Suite 103, Waipahu. Pediatrician **Guy Hirayama** joined the Maui Medical Group with offices in Wailuku and Lahaina.

(Continued on page 170)

(Continued from page 169)

Conference Humor

John Michael Colman Ryan, associate clinical professor of medicine, UCSF, spoke on "Current Concepts in the Treatment of Hypertension" at Mabel Smyth Auditorium in January: "I have three reasons for speaking on hypertension. First, I'm Irish and we have a longer experience with antihypertensive drugs; e.g. Inderal has been used in Ireland since 1966, whereas it was released for use in the U.S. in 1976. Second, I headed the VA Cooperative Study that included 2,000 patients. Third, I know absolutely everything about the subject." John told the following anecdote: "In Ireland there are 300 first-year med students, of which only 100 graduate. Usually the students are seated in alphabetical order, but I as a student, would sit up front in order to be recognized. The surgeons in Ireland are absolute tyrants, you know. One day, the surgery professor pointed to me and asked, 'What do you know about ulcerative colitis?' I answered: 'I don't know, sir . . . ' He said, 'Never say I don't know . . . Say, I've forgotten. So the next time the professor asked, 'Mr. Ryan, (I was pleased that he now remembered my name) what is the cause of Hashimoto's Disease?' I replied forthwith, 'I've forgotten, sir!' Came the retort: 'Ladies and Gentlemen . . . No one knows the cause of Hashimoto's Disease . . . Witness here the only person who has forgotten.' "

Personal Glimpses

Ex-pugilist **Ray Hiroshige** may have become increasingly deaf in recent years (perhaps the result of his earlier boxing career), but he hasn't lost his sense of humor. Pointing to hearing aids in both ears, he joked, "Now it's stereophonic!"

K.C. Chock, celebrated his 90th birthday with a banquet in his honor in January this year. He still plays a mean volleyball game at the "Y" but may retire from practice in June.

Life in These Parts

An older physician who was hard of hearing was making rounds and asked **Noboru Akagi** what the Japanese term for coronary artery was. So Noboru told him, "KANJO DOMYAKU." The physician went up to his Japanese patient with heart disease and told him "ANATA NO KONJO GA WARUI." Fortunately the patient survived the shock of hearing his physician say, "You are ill-tempered!"

On the heals of a statewide outbreak of pertussis, state health and education officials are asking for a new law requiring students to be immunized against vaccine-preventable diseases before entering any grade instead of only before entering school for the first time. During a recent outbreak of measles, DOH officials had to enact an emergency rule requiring proof of measles vaccination.

Hospitals and nursing homes would have lost $1.5 million in five months if the amendments to the Hawaii Medicaid Plan had been enforced on February 1 as planned. Federal Judge Harold Fong issued temporary orders on January 25 holding off the enforcement of the amendments on behalf of the Hospital Association of Hawaii, the Hawaii Long-Term Care Association and private long-term health-care centers. Two lawsuits filed by the long-term health-care centers charge that the state amendments violate federal laws.

Honolulu cardiac surgeon **Jeff Lau** is thawing-out after enduring zero-degree temperatures in China where he held a cardiovascular symposium in November 1984 in Hangzhou. It was his second symposium in China. (don chapman 1/28/85)

Wahiawa General Hospital, with an active staff of more than 50 physicians, will follow the course of most other Oahu hospitals and require all physicians with privileges to carry malpractice insurance as of April 1, 1985. The nationwide trend toward high malpractice insurance premiums for obstetricians and the ruling of the Board of Trustees of Molokai General Hospital has forced Molokai physicians to stop delivering babies as of the first of the year. Obstetrician **Ralph Hale** travels once weekly from Oahu to Molokai to do prenatal exams. Emergency room physicians at the Molokai hospital will deliver babies only in an emergency. About 20 pregnant women are expected to deliver in the next 3 months; some will go to Maui for delivery while the others will go to Honolulu where Ralph can schedule them for induction of labor and delivery at Kapiolani Children's Medical Center at a probable due date determined by ultrasound. Meanwhile Molokai is still trying to recruit a family practitioner to cover pregnancy and delivery.

There was plenty of heat — but no smoke — at a City Honolulu Council hearing as 46 citizens debated a proposal to ban smoking in enclosed public places on Oahu. **Robert Lutz**, a physician working with Project CAN (Clean Air Now), testified: "Citizens expect clean, potable water, and if a person wishes to contaminate his own water, that's his privilege; but he may not contaminate the drinking water of other people. Should it not be the same with our air?" Honolulu Convalescent Center administrator Abe Sakai said: "Proscribing smoking in patients' rooms would be against patients' rights." Stanley Snodgrass of the Hospital Association said: "Hospitals would find it hard to segregate smokers from non-smokers in semi-private rooms." Of those testifying, 33 were for the bill and 13 were against it.

The Ronald McDonald House controversy flared anew in February when **Walter Young** and seven other pediatric surgeons signed a resolution calling for relocation of the home away from the Judd Hillside Road location. Walter and members of the pediatric surgical staff believe the house should be closer to the Kapiolani Children's Medical Center.

Anti-abortion spokesmen gathered in Hilo on January 22 for a "Rally for Life", claiming that the majority of Americans oppose abortion and that the Reagan administration would reverse the legalization of abortion. Hilo physician **Paul Matsumoto** commented on Reagan's opportunity to reverse the Supreme Court decision legalizing abortion through his appointments to the high court. Paul feels that Hawaii should pass legislation banning public funds for abortion.

Russell Hicks has hit the lecture circuit to dispel the popular myth that "Pot" is harmless. Russ points out the following: "One year of daily marijuana-smoking produces the same amount of lung damage as does 10 to 20 years of heavy cigarette smoking. There are 50% more cancer producing materials in marijuana than in tobacco.

Book Review

Treating Type A Behavior and Your Heart; M. Friedman, M.D., and D. Ulmer, R.N., 285 pp. Alfred A. Knopf, New York. $15.95.

This book is written for the lay person who wonders what can be done to prevent a myocardial infarction. The authors stress the importance of type A behavior as a risk factor as important as smoking, hypertension, and raised cholesterol. They describe its salient characteristics in the light of further experience since 1974 when "Type A Behavior and Your Heart" was released.

On the basis of a 4-year controlled study with more than 1,000 patients who had had one or more myocardial infarctions, they were able to modify type A personality by special counseling. This significantly decreased repeat myocardial infarction apparently.

The style is easy and the anecdotal evidence overwhelming, but the rather extravagant language and the lack of medical details leave the medical observer with some questions.

Physicians should be aware of this hypothesis and evidence for their patients' sake (and perhaps their own). I enjoyed the book but why wasn't I able to find someone to review it?

D.G. Massey, M.D.
Professor of Medicine

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Preterm Delivery in Tourists:
The Hawaii Experience

David Easa, M.D., Kenneth Ash, M.D., Rodney Boychuk, M.D., Greg Yim, Peter McNally, M.D., Thomas Kosasa, M.D.

• *An unexpected number of pregnant tourists giving birth to premature infants over the last 6 years prompted us to review our experience. Twenty-four tourists from 7 countries including 18 from the United States were delivered of 27 infants. The mean gestational age was 30 weeks and mean birth weight was 1500 grams. Almost 80% of the pregnant tourist group had some risk factor associated with their pregnancy. Although we could not demonstrate any relationship of premature delivery to travel, there were serious social and economic consequences. We suggest that the possibility of premature delivery and other pregnancy complications be discussed with pregnant women prior to considering long distance travel. Also, pregnancy-related travel should be limited for those women with associated risk factors.*

Current textbook recommendations regarding travel during pregnancy suggest a liberal approach with few restrictions except near term.[1-4] These recommendations are based in part on studies published in the 1940s and 1950s relating to travel in pregnant women.[5-11] Guilbeau, in a 1953 study of nearly 2,000 women, concluded that "the incidence of complications arising during or after long journeys was no more than would be expected to occur normally in a similar group of patients who did no traveling."[7] However, both prenatal care and travel have changed radically since then.

Over the past six years, we have cared for an unexpected number of premature infants delivered of tourists. To determine the etiology of this phenomenon, we designed this study to: (1) Review the charts of all pregnant tourists admitted to the tertiary perinatal facility for the State of Hawaii, Kapiolani/Children's Medical Center (KCMC), over the past 6 years; (2) ascertain the clinical characteristics and outcome of the group of mothers giving birth to premature infants; (3) compare the perinatal risk factors and neonatal outcomes of the tourist group with a gestational age-matched control group; (4) survey a representative group of Honolulu-based obstetricians' recommendations regarding travel during pregnancy; and (5) develop conclusions based on these findings.

Correspondence: David Easa, M.D. Director of Neonatology, Kapiolani/Children's Medical Center, 1319 Punahou Street, Honolulu, Hawaii 96826, Tel. (808) 947-8511.

From the Department of Pediatrics and Obstetrics & Gynecology, University of Hawaii School of Medicine.

Accepted for publication March 1985.

Materials and Methods

The medical charts of all pregnant women admitted to KCMC from January

TABLE 1.

General Characteristics of Patient Groups

Category	Number (Mothers)	Residence		Gestational Age Mean (Range)	Maternal Hospitalization Mean (Range)
‡Miscellaneous Short-Term Admission Group #1	7	USA Canada Japan Brazil	— 3 — 1 — 2 — 1	25 Weeks (10-37)	2.3 Days (1-4)
Spontaneous Abortion Group #2	12	USA Canada Japan Ponape	— 6 — 3 — 2 — 1	14 Weeks (5-21)	2.0 Days (1-5)
Liveborn Premature Infant Group #3	24	USA Other	—18 — 6	30 Weeks (24-36)	11.3 Days (2-35)
Total	43	USA Canada Other	—27 — 5 —11	—	—

‡ — Premature Labor (3)
— Vaginal Bleeding (1)
— Spontaneous Rupture of the Membranes (1)
— Hyperemesis Gravidarium (1)
— Liveborn Term Female (1)

TABLE 2.

Clinical Characteristics of Maternal Group

Factors	High-Risk	Possible Risk
Number	12/24 = 50%	7/24 = 29%
Characteristics	— Previous Stillborn (2) — 3 - Intentional Termination of Pregnancy (2) — Uterine, Cervical and Vaginal Anomalies (1) — Previous Prematurity (3) — Multiple Gestation (3) — 1 - Spontaneous Abortion, 2 - Intentional Termination of Pregnancy (1)	— 1 - Intentional Termination of Pregnancy (1) — Smoking - 2 Packs/Day (1) — Urinary Tract Infection (2) — Increase in coitus (1) — Travel Fatigue (2)

1978 to March 1984 were reviewed. Three groups of "pregnant tourists" were identified (N = 43) (Table 1): A miscellaneous group of short-term admissions (N = 7); a second group presenting with spontaneous abortion (N = 12); and a third group of mothers delivered of live-born premature infants (N = 24).

The third group, consisting of 24 pregnant tourists delivering 27 premature infants, was reviewed in detail. Nineteen of the 24 parents were interviewed by one of the authors (D.E.) near the time of delivery to evaluate the circumstances surrounding the onset of premature labor. The clinical characteristics of the maternal and infant groups were studied (Tables 2,3) and the outcomes of the infant group were analyzed in relation to the presence or absence of maternal high risk factors (Table 4). These factors were divided into "high-risk" and "possible-risk" factors on the basis of published reports[12-19] as well as the ability of the physician to anticipate a particular risk prior to travel. For example, although urinary tract infection (UTI) is an important high-risk factor predisposing to premature delivery,[15] mothers in the tourist group who developed UTI, did so after arriving in Hawaii. For that reason, UTI as a risk factor was assigned to the possible-risk category.

Also, we matched each infant delivered of a tourist (N = 27) with 2 controls of comparable gestation (N = 54) from our own Neonatal Intensive Care Unit (NICU) population in 1983. The clinical characteristics of the pregnant tourists as well as their offspring were then compared to this group of mothers and infants (Table 5). Statistical analysis, when appropriate, utilized chi-square and analysis of variance testing.

To determine whether Honolulu obstetricians' recommendations of travel during pregnancy were consistent with current textbook recommendations, a survey involving Honolulu obstetricians (private practice obstetricians) (N = 24), university based obstetricians (N = 5), and obstetrical residents (N = 11)) was performed by one of the authors (P.M.), an obstetrics resident (Table 6). This survey was done on a one-to-one basis without mentioning the purpose of the survey of gaining any details concerning the magnitude of the tourist delivery problem at our center.

TABLE 3.

Clinical Characteristics of Infant Group

*Hospitalization (Days) Mean ± S.D. (Range)	47 ± 45 (3 - 169)	—*Apnea and Bradycardia Requiring Methylxanthines	57%
Diagnosis		—*Bronchopulmonary Dysplasia	19%
— Respiratory Distress Syndrome	52%	—*Proven Sepsis	10%
— Requiring Ventilation	57%	—*Intraventricular Hemorrhage	37%
—*Duration Ventilation (Days) Mean ± S.D. (Range)	46 ± 23 (5 - 63)	—*Significant Feeding Problems Requiring Total Parenteral Nutrition	38%
— Requiring Oxygen	59%		
—*Duration Oxygen (Days) Mean ± S.D. (Range)	51 ± 40 (1 - 106)	— Duration of Hyperalimentation (Days) Mean ± S.D. (Range)	36 ± 22 (5 - 75)
—*Patent Ductus Arteriosus Requiring Indomethacin and/or Surgery	38%	—* Retrolental Fibroplasia	19%
		—*Transported Back to Hometown Hospital	33% (7)
			21

* Survivors (21 Infants)

Results

Twenty-four tourist mothers gave birth to 27 infants from January, 1978 through March, 1984. Nine of these deliveries occurred in 1983 and 6 in 1984. Eighteen of the 24 mothers were from the United States representing 9 states: California (7); New York (3); Texas (2); Oklahoma (1); Connecticut (1); Kentucky (1); Iowa

TABLE 4.

Outcomes of Infants Related to Maternal Risk Factors

Category	Number	Permission Obtained to Travel	Gestational Age (Mean)	Mortality % (Number)	Requiring Ventilation % (Number)	+Short-Term Morbidity % (Number)	+Long-Term Morbidity % (Number)	+Hospitalization Mean (Days)
High-Risk Maternal	12	100% 11/11	* 29.1 ± 3.3	33% 5/15	67% 10/15	60% 6/10	10% 1/10	* 88.2 ± 68.9
Possible + No-Risk Maternal Group	12	88% 7/8	* 32.5 ± 4.1	8% 1/12	33% 4/12	27% 3/11	9% 1/11	* 28.3 ± 29.6

+ Survivors *Significantly Different ($p < 0.05$)

(1); Florida (1); Illinois (1). The 6 remaining mothers were from foreign countries: Canada, Australia, Taiwan, Tahiti, Hong Kong and Saudi Arabia.

The maternal group was composed of 24 women with a mean age of 29.4 years (range 20-36 years). The mean gravidity was 2.3 (range 1-5) and parity was 0.9 (range 0-4). Fifty percent of the group had obvious high-risk factors that probably contributed to the preterm delivery of their infants. Another 29% of the maternal group had some possible-risk factors influencing their pregnancy state. These factors are summarized in Table 2.

The mean birth weight of the 27 infants born to this group was 1500 grams (range 660-3006 grams). The mean gestational age was 30 weeks (range 24-36 weeks) and the mortality was 22% (6 of 27). Further clinical data on this infant group is shown in Table 3.

Table 4 summarizes the relationship between the outcomes in the infant group and maternal high-risk factors. The maternal sub-group with obvious high-risk factors, were delivered of infants of a younger mean gestational age who required a longer hospitalization, as compared to the maternal sub-group with possible- or no-risk factors ($p < .05$). Although not statistically significant, greater morbidity and mortality also occurred in infants born to this high-risk maternal sub-group.

The maternal and neonatal characteristics of the tourist group were compared to that of a local population of mothers who delivered infants requiring admission to our NICU in 1983 (Table 5). The results indicate that the clinical characteristics of the maternal and neonatal tourist group, including maternal high-risk factors, neonatal morbidity and mortality, were similar to this local control group of infants and mothers.

Finally, in Table 6, the results of the survey of the Honolulu-based obstetricians regarding travel guidelines in pregnancy are presented. These demonstrate the spectrum of travel recommendations by private obstetricians and smaller groups of university faculty and residents. Also, this table shows the group's consensus in terms of medical complications of pregnancy that contraindicate travel.

Discussion

According to the Hawaii Visitors Bureau, approximately 600,000 women between the ages of 20 and 40 travel to Hawaii each year. An unexpectedly large number of premature deliveries in pregnant tourists to Hawaii made us concerned that air travel may have contributed to the onset of premature labor in this group. With limited pressurization in the commercial aircraft, factors such as expansion of gas in hollow viscera and

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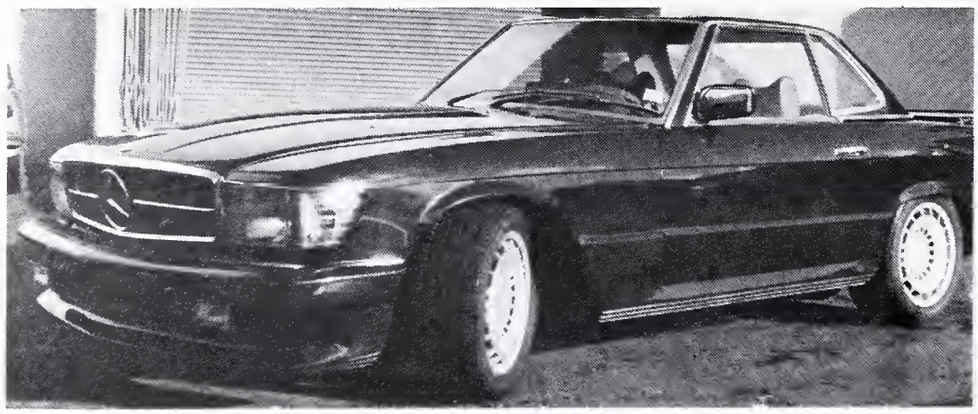
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decreasing oxygen levels at high altitudes may theoretically result in an adverse effect on pregnancy.[20, 21] However, it is not known what percentage of the women traveling to Hawaii were pregnant or, if so, at what stage of gestation. We were, therefore, precluded from directly assessing the impact of travel on the incidence of premature delivery in tourists. Attempts on our part to estimate the numbers of this transient population expected to deliver prematurely during their brief stays in Hawaii and compare it to actual incidence figures were fraught with such a large margin of error as to make the numbers meaningless.

We felt that an alternative means to assess the tourist group was to compare them to a control group of infants and their mothers from our local NICU admission population. Two controls were selected at random from our 1983 admission population and matched by gestational age with the tourist infants. By this method we hoped to determine whether the tourist group represented an unusual population.

The control and tourist group were comparable in terms of gestational age, birth weight, hospitalization, mortality and morbidity. They were also comparable in terms of the precentage of high-risk factors. There were no statistically significant differences between the possible-risk factors or the high-risk plus possible-risk factors in either group. The higher percentage of possible-risk factors in the tourist group probably represented our more thorough knowledge of factors in this group such as travel fatigue, more frequent coitus, etc. Thus if travel does have an effect on premature delivery, it does not appear to exert its effects on a uniquely defined group of pregnant women. Whether the absolute number of premature deliveries was increased by travel, is beyond the scope of this study.

By virtue of the percentage of high-risk factors, the tourist group represented a high-risk population of mothers. Yet, of the 14 mothers interviewed, 13 obtained permission to travel from their family physicians. Ten of these 13 were mothers from the high-risk factor group. The apparent lack of concern over travel in pregnancy probably derives from the dearth of information on the subject, the opinions expressed in medical journals[5,11] and textbooks[1-4] and the lack of experience with this problem that any individual physician is likely to have. The prevailing view that the relationship between pregnancy and traveling by air is not a medical concern is reflected in our survey of 24 private-practice obstetricians, 80% of whom recommended either totally unrestricted travel during pregnancy or travel interdiction only during the last month of pregnancy. Only two high-risk factors were considered by more than 75% of the responding obstetricians to be contraindications for

TABLE 5.

Risk Factors in Tourist Group Compared to Gestational Age Matched Controls

Group	Number Mother/Infant	Gravity/Parity Mean	Gestational Age (Weeks) Mean ± S.D.	Birthweight (Grams) Mean ± S.D.	Hospitalization (Days) Mean ± S.D. Mother/Infant	NEONATAL				MATERNAL		
						Mortality % (Number)	Requiring Ventilation % (Number)	Short-Term Morbidity % (Number)	Long-Term Morbidity % (Number)	High-Risk Factors % (Number)	Possible-Risk Factors % (Number)	High-Risk + Possible-Risk
Control	51/54	2.6/1.0	30.4 ± 3.7	1475 ± 668	9.8 ± 10.4 / 54.0 ± 43.9	19% 10/54	61% 33/54	41% 18/44	9% 4/44	55% 28/51	8% 4/51	63% 32/51
Tourist	24/27	2.3/0.9	30.4 ± 3.9	1500 ± 785	11.3 ± 11.5 / 47 ± 45	22% 6/27	57% 13/23	43% 9/21	10% 2/21	50% 12/24	29% 7/24	79% 19/24

travel: Previous premature births and multiple gestation.

The delivery of a premature infant shatters a pleasant travel experience for a tourist family, and takes a toll that is both social and economic. Ten of the 24 mothers in our study required air-ambulance transport to the perinatal center from neighbor island hospitals. They required hospitalization on the average of 11.3 days at our perinatal center. During this period, all were thoroughly evaluated for gestational age and maternal/fetal well-being; most were placed unsuccessfully on a course of tocolytic therapy. After discharge from the hospital many had to rent apartments; many were visited by friends and relatives from the Mainland and some had to take a leave of absence from work during the hospitalization of their infants. The financial losses in the tourist group represented not only medical expenses that insurance would not cover (as high as $140,000 in one case), but also the expense of rent, food, travel and loss of work income, (amounting to $40,000 in another case). Worry over these financial burdens was compounded by the separation of the mother and infant from home and family and the necessity of accepting medical care from stranger physicians, in unfamiliar hospitals and in an unfamiliar city. These burdens were superimposed on the family's prevailing concern for the medical condition of their premature infant in the intensive care unit. An enormous amount of time was devoted by the perinatologists, neonatologists, nurses and social workers in managing the complex circumstances of these families.

Though failing to demonstrate that travel contributes to the incidence of prematurity, this study does show that liberal travel policies for pregnant women overlook the serious social and economic implications of premature delivery that may ensue. We therefore recommend that obstetricians and family physicians discuss the possibility and implications of premature delivery and pregnancy complications with all mothers planning to travel. We also recommend

TABLE 6.

Travel Guidelines in Pregnancy Honolulu OB/GYN Community

Group	Number	Yrs in Practice Mean (Range)	Unrestricted Travel	Discourage ≥ 36 Weeks	Discourage ≥ 32 Weeks	Discourage Third Trimester	Travel Strongly Contraindicated ≥ 75% of Respondents	Travel Probably Contraindicated In > 25% But < 75% of Respondents	Travel Not Contraindicated In (< 25%) of Respondents
Private Practice	24	16.0 (1-40)	13%	67%	16%	4%	• Previous Prematurity • Multiple Gestation	• Uterine Anomalies • Previous Spontaneous Abortion • Hypertensive Disease • Previous Stillborn	• Smoking (≥2 Packs/Day) • Previous Intentional Termination of Pregnancy (≥ 2) • Urinary Tract Infection
University Practice	5	13.0 (2-32)	0%	40%	20%	40%	• Uterine Anomalies • Previous Spontaneous Abortion • Previous Prematurity • Multiple Gestation	• Hypertensive Disease • Previous Stillborn • Urinary Tract Infection	• Smoking (≥2 Packs/Day) • Previous Intentional Termination of Pregnancy (≥2)
OB-GYN Residents	11	—	0%	27%	45%	27%	• Previous Prematurity • Multiple Gestation	• Uterine Anomalies • Hypertensive Disease • Previous Stillborn • Urinary Tract Infection	• Previous Spontaneous Abortion • Smoking (≥2 Packs/Day) • Previous Intentional Termination of Pregnancy (≥ 2)
Total	40	—	7%	53%	25%	15%			

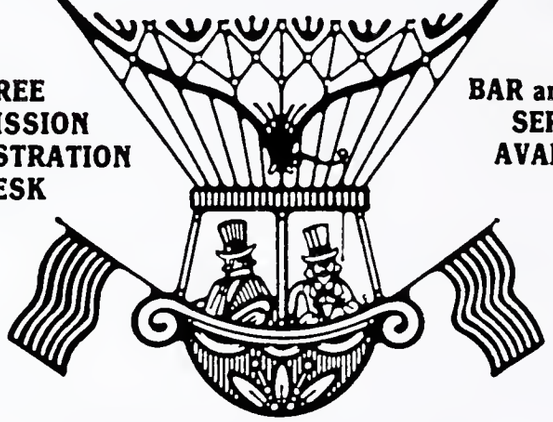
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discouraging long distance travel for women with major risk factors in their 2nd and 3rd trimesters of gestation.

Addendum

Since preparation of this paper, we have had an additional 2 tourist mothers admitted to our center. One, at 30 weeks gestation, was admitted with spontaneous rupture of the fetal membranes and premature labor. She came from California with a history of two previous ITOPs (high-risk factor). She had been given permission to travel by her physician. At the time of the submission of this paper, she has yet to deliver. The second tourist mother, from Canada, presented in premature labor at 30 weeks gestation, and gave birth to a 1325 grams female infant, with respiratory distress syndrome. She had also been given permission to travel by her physician. Since she had a history of one ITOP, that put her in the category of possible-risk.

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Over the Editor's Desk

J.I.F. Reppun, M.D.

Cromolyn sodium, previously available in the USA as a 1% solution or dry powder aerosol for treatment of asthma (Intal — Medical Letter, 15:89, 1973) and as a liquid nasal spray for allergic rhinitis (Nasalcrom — Medical Letter, 25:89, 1983), also is marketed in a 4% ophthalmic solution for prevention and treatment of allergic conjunctivitis (Opticrom — Fisons). An ophthalmic solution has been available since 1976 in Great Britain, where the drug is known as sodium or disodium cromoglycate.

* * *

Pentamidine isethionate (Pentam 300), an antiprotozoal agent previously available only through the centers of Disease Control, now can be obtained commercially from LyphoMed, Inc., 2020 Ruby Street, Melrose Park, Ill. 60160. Although it also has been used to treat trypanosomiasis and Leishmaniasis (Medical Letter, 26:27, 1984), pentamidine is being marketed in the USA only for treatment of Pneumocystis Carinii pneumonia. Once an uncommon disease found sporadically in patients with primary immunological deficiencies, hematological malignancies, or organ transplants, P. carinii pneumonia now occurs frequently in patients with the Acquired Immunodeficiency Syndrome (AIDS) (WT Hughes in GL Mandel et al., eds, Principles and Practice of Infectious Diseases, 2nd ed., New York: Wiley, 1985).

* * *

Flunisolide (AeroBid — Key) and triamcinolone acetonide (Azmacort-Rorer) now are available in the USA in oral aerosol formulations for treatment of asthma in children and adults. Both flunisolide and triamcinolone acetonide are highly active topically but are poorly soluble in water and have little systemic activity (CS Ted Tse and IL Bernstein, Pharmacotherapy, 4:334, November/December 1984). Another corticosteroid oral aerosol, beclomethasone dipropionate (Beclovent; Vanceril), has been available in the USA for several years (Medical Letter, 18:76, 1976).

* * *

The prevention, detection, and treatment of thromboembolic disease associated with general surgery are discussed in a

(Continued on page 186)



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Liposuction:
Removal of Body and Facial Fat Deposits by Subcutaneous Suction

Bruce B. Chrisman, M.D.

• *Various forms of suction-related fat removal methods have been developed in the past several decades in Europe and elsewhere, but none were truly safe and effective until the method, developed about 9 years ago in France by Illouz and Fournier, became popular. Their method involved the use of a blunt, hollow cannula that can push aside small vessels and nerves while at the same time dislodging globules of subcutaneous fat and allowing their removal via an opening on the side of the cannula near its tip.*

Although there was an occasional U.S. practitioner in the past who had done the procedure, liposuction has not been widely practiced in the United States until the past 2 years. This was the result of training in France of a multi-specialty group of American physicians and a later evaluation tour by representatives of the American Academy of Plastic and Reconstructive Surgery, who went to France and found the modern French method to be a safe and effective procedure. Since then a large number of physicians, primarily in the specialties of plastic surgery, otolaryngology, and dermatology, have become interested and trained in this versatile and non-traumatic surgical procedure. Although the procedure is new, so many cases have been done in the United States, as well as elsewhere, that it no longer can be considered experimental. Indeed, it might be said to have revolutionized some forms of cosmetic surgery in a very short period of time. Additionally, new methods are being conceived, such as the defatting of larger myocutaneous flaps.[1] Others also are being envisioned or researched. Within the past year, a relatively large volume of literature on the subject of liposuction has been published in America.[2-21]

Patient Selection

One of the most important principles of liposuction procedure is that it is a sculpting rather than a weight-loss method. Its value lies in the removal of unwanted or dystrophic fatpads, deposits which physically or at least psychologically distort the patient's face or body appearance. Only the deeper subcutaneous fat is removed, so as to smooth and shape the area in question, leaving behind enough fat just under the skin to maintain body contour characteristics in keeping with the nearby areas. The nature of the liposuction procedure makes it the only surgical contouring method which allows direct visual evaluation as well as palpation of the treatment area during the actual surgery. The skilled practitioner thus becomes as much a sculptor as a surgeon. Relatively small amounts of fat, by actual weight, are removed — on the order of ½ to 4 pounds. However, the final result gives the appearance of more than this having been removed; and this is probably the result of further degeneration and loss of fatty tissues during healing. It is important that the patient realize that final results are not apparent for 2 to 6 months in most cases. As an elective cosmetic procedure, liposuction is reserved for healthy patients, and is not done on patients having significant anemia or a history of bleeding disorders.

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Accepted for publication March 1985.

Possible Areas of Treatment

In women, the most frequently treated area is the "saddle bag" pouch of fat over the trochanteric area of the lateral hip. In men, it is the "love handle" fatpads at the lateral waist area. Another frequently treated area in both sexes, particularly women, is the lower abdomen, sometimes including the upper-mid or lateral abdominal areas. Other areas include the fatty desposits of the upper inner thighs, medial knees, and also small pockets just above and below the patellae, the upper posterior thigh/lower buttock area, the upper posterior arm, and pseudo-gynocomastia in males. liposuction also is being applied to female breast reduction and reduction of the volume of the thighs. Occasionally, the posterior ankles also can be sculpted by the liposuction method.

In the face, the liposuction procedure has been very rapidly adopted as a preliminary step and adjunct during the facelift procedure. It is used to remove fat from the submental area of the chin, the jowls, the preauricular area, or the folds of the central face. These areas also can be sculpted separately, aside from the facelift procedure.

Consultation and Examination

Areas of fat dystrophy pinpointed by the patient are examined to be sure that there is indeed palpable subcutaneous fat, rather than herniated muscle, loose abdominal wall, or other aberrant anatomy. Fat is the usual problem, and some asymmetry often is found. The patient also must be evaluated for reasonable skin elasticity. Those with an irregular skin surface ("cellulite") are made aware that this is not likely to be

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TABLE

Liposuction Data — Hawaii*
February 1983 through September 1984

Site	No. Done	Minor, Transient Complications	Serious Complications	Post-op Hospitalization Required
Head and neck	124	14	0	1 (nausea from sedation)
Upper arms	6			
Trunk area	125			
Lower extremity	176			
Lipomas	13			
TOTAL	444			
Percent		3.2%		0.2%

*Data compiled from three major practitioners of liposuction, including the author.

changed in the removal of deeper subcutaneous fat during the liposuction procedure.

During consultation, the patient is made aware of the body areas that can be treated safely by liposuction and of the requirement for proper skin elasticity. It also is pointed out that one or two significant areas can be done in one session with sedation plus local anesthesia (sometimes augmented by light nitrous oxide analgesia) or that larger numbers of areas can be done at the same session using light general anesthesia. It is stressed that there is a limit to the amount of fat that can be removed regardless of the type of anesthesia; this is ca. 1500cc in outpatient procedures. Many patients have relatively few areas of excess body fat causing concern and are quite happy to have the procedure done under sedation plus local. This technique has gained popularity in this country, the author being one of its early practitioners. The amount of local anesthetic that can be used safely depends upon the size of the area that is to be treated by this method, up to a safe maximum.

The amount of safe fat removal has been determined through trial and error; the vast majority of patients are quickly ambulatory if less than 1500cc of fat have been removed and an adequate amount of crystalloid fluid replacement has been given before and during the procedure. If greater than 1500-1800cc of fat are to be removed, then colloid fluid replacement and hospitalization may become necessary.

During the prior consultation, the patient is told that this is indeed a cosmetic procedure, that it takes time to heal, that it occasionally may require more than one procedure to obtain the best results, and that there may be problems and complications. These are generally few, and the liposuction procedure has been shown to be safe as well as effective (Table). Most patients experience mild bruising as well as moderate swelling in the first few weeks postoperatively. Some will have unevenness or "furrowing" of the skin surface for several months. I feel that this may be largely related to technique; but in any case, it usually resolves after the first 2 or 3 months. There is usually some soreness in the treated area for several days to several weeks, and numbness or parasthesia is not uncommon during this time. More serious complications such as infection, hematoma, permanent unevenness, permanent numbness, etc., are quite rare. To my knowledge, post-operative fat embolism has never been reported.

Procedure

The appropriate cannula is selected, usually 8-10mm in diameter for large areas such as the lateral hip or abdomen, 6mm for the knee, and as small as 4mm for the face. After routine skin prep and draping and appropriate anesthesia, a small incision between 4 and 12mm in length is made in the skin, usually at an inconspicuous site such as the bikini line on the lateral hip, the horizontal gluteal crease, the umbilicus, or the submental crease, etc. Scissors then are used to dissect down to the superficial fascia, after which the cannula serves as a blunt dissector to create a number of tunnels radiating out from the incision site, in a plane just external to the underlying superficial fascia. For thick fatpads, a secondary plane of tunneling, closer to the skin than the first, also may be made. The cannula is then connected to a source of strong suction (negative pressure approaching one atmosphere) and with its suction hole facing downward, is used to methodically suction the fat from the dystrophic area. At the same time, the operator's other hand is used to pinch and palpate the skin until the amount of fat remaining beneath it is equal to that of the nearby, untreated areas. Less and less of the deep subcutaneous fat is removed peripherally, leaving a band of tunneled but unsuctioned fat around the perimeter to blend into the surroundings. If any significant amount of bleeding is noted, liposuction is discontinued in that tunnel and another one nearby is done instead. In most patients, very little bleeding is encountered, particularly if local anesthetic or saline containing epinephrine has been used in the suction area prior to surgery. Frequently, so little bleeding is seen that drains are not necessary.

For the surgeon, the procedure is surprisingly strenuous. For the sedated patient not under general anesthesia, liposuction can be likened to the pressures of a Swedish massage accompanied by occasional discomfort. Most patients tolerate this quite well and indeed are not hesitant to return at another time to have other areas treated.

Post Operative

After surgery, the suctioned area is thoroughly bandaged with wide elastic tape to maintain constant pressure during the first week of healing. This is followed by 2 more weeks of girdle, abdominal wrap, or other pressure. The goal is to redistribute the remaining subcutaneous fat into a smooth, even plane. Sutures generally are removed after 5 to 7 days, and the small incisions, after several months, are usually inconspicuous or even invisible. When the dressings are removed, the treated area often appears unchanged, and occasionally even worse than it did before surgery. This is due to post-operative edema, which slowly but steadily resolves in about 6 to 20 weeks in most patients. Despite this fact being stressed during prior consultation, patients often need reassurance as they impatiently await the final results. After healing is complete, improvement will be seen in almost all patients (Fig. 1) and the results in some patients are spectacular (Fig. 2).

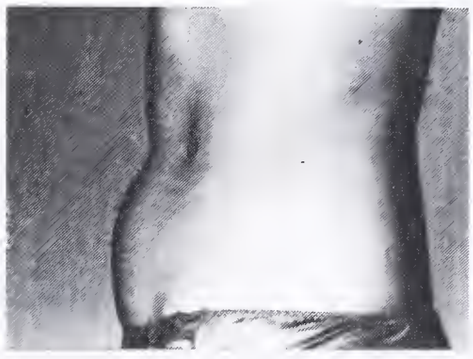


Fig.1a. Abdominal liposuction, 35-year-old female. Before surgery.



Fig. 1b. Four months post-op.

Most patients experience only mild to moderate pain post-operatively with some patches of moderate bruising in the treated area. Most are ambulatory immediately after the surgery and are soon back to mild activities. Many patients who have had a small to moderate amount of fat removed will be back to work in 3 days or so.

Conclusion

The new surgical technique of liposuction, in trained hands, is a safe and effective procedure which has allowed face and body sculpting with minimal trauma, discomfort, and time lost from work, as compared to previous procedures. There is little or no scarring, often no need for hospitalization, and the procedure has literally revolutionized some types of cosmetic surgery in this country within the past 18 months.



Fig. 2a. Lateral thigh (and upper posterior thigh) liposuction, 30-year-old female. Before surgery.



Fig. 2b. Four months post-op.

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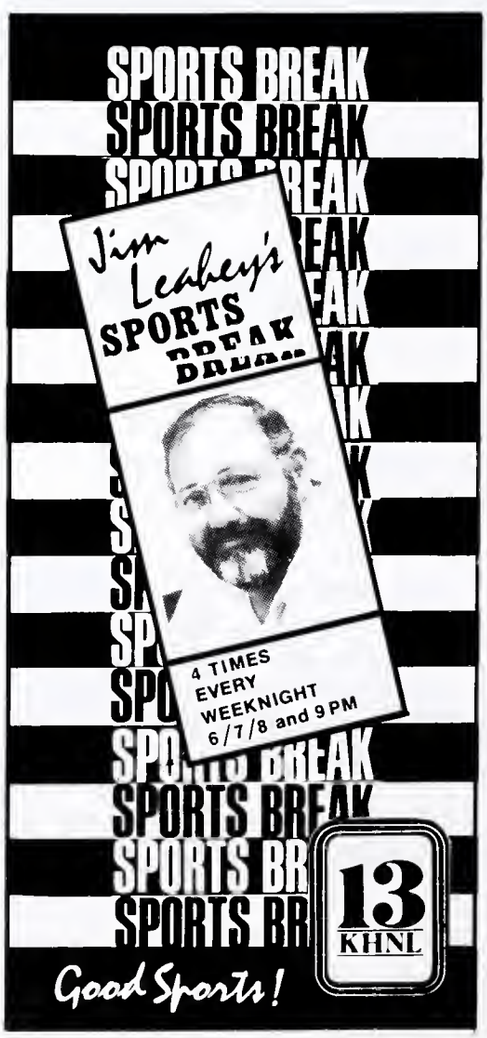
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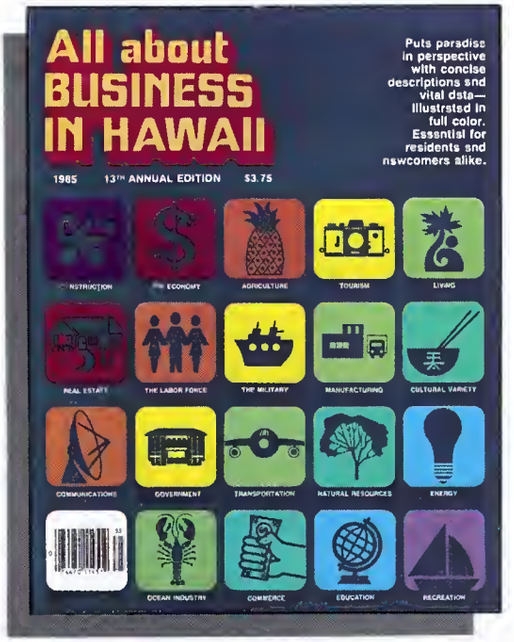
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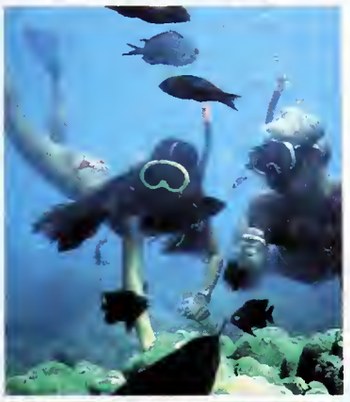
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The Geographic Distribution of Rheumatic Fever in Hawaii

L.T. Chun, M.D., and Venu Reddy, M.D., M.P.H.

• *The following is a report on the geographic distribution of acute rheumatic fever (ARF) in Hawaii that is an addendum to our article which appeared in the May 1984 issue of the American Journal of Diseases of Children.[1] We further wish to report on the incidence rate of ARF according to the welfare status of the children.*

We acknowledge the prior reports concerning rheumatic fever (RF) in Hawaii which have appeared since 1941.[2-5] In summary, we reported on annual incidence rate of ARF of 14.4 per 100,000 Oahu children (4 through 18 years of age) for the period October 1976 through September 1980.[1] The rate for first attacks was 12.5 per 100,000 and that for recurrent acute attacks was 1.9 per 100,000. Table 1 is reproduced from the above study to give additional information on ARF and carditis with the relative risk and incidence rate according to ethnicity.

From the John A. Burns School of Medicine, University of Hawaii, The Honolulu Medical Group, Inc., Honolulu, Hawaii. Supported by grants from the Hawaii Heart Association.

Correspondence: L.T. Chun, M.D., 30 Aulike Street, Suite 201, Kailua, Hawaii 96734 Phone: (808) 262-6946.

Accepted for publication January 1985.

Methods

The geographic locations were determined by census tracts which were then grouped into districts according to the 1980 U.S. Bureau of Census that also provided age group statistics 3 through 18 years of age.

Our study was conducted in conjunction with a streptococcal detection survey among school children in public schools.[6] Of the 156 eligible schools, 93 were selected for the program that operated for the period October 1976 through September 1980. The cases of ARF were classified on the basis of the school attended and of welfare status of the children (Table 2).

Results

Table 3 shows the annual incidence rate of ARF per 100,000 children by geographic location. District 22 (Laie, Hauula, Kaaawa) had the highest incidence rate of 86 followed by district 7 (Waikiki) with a rate of 40. Other districts with incidence rates between 25 to 32 were district 8 (Kakaako), 21 (Waialua, Haleiwa, North Shore), 11 (Kapalama, Iwilei), and 10 (Kalihi). The largest actual number of cases were from Kapalama-Iwilei, Laie-Hauula, Waianae-Nanakuli, Kalihi and Kaneohe-Kahaluu.

There was no statistical difference in the incidence rates of ARF among children who attended schools that did and those that did not participate in the streptococcal culture program. Children on welfare had a much higher annual incidence rate of ARF per 100,000 than those who were not on welfare. The rate for the former was 39.8 and that for the latter was 7.5.

TABLE 1.
Incidence of Acute RF and Carditis According to Ethnicity for 4 to 18 Years of Age on Oahu, 1976 to 1980*

Ethnic Group	Population	% of Population	Acute RF			Carditis		
			No. of Cases	Rate†	Relative Risk‡	No. of Cases	Rate†	Relative Risk‡
White	39,079	21.7	14	9.0	1.0	1	0.6	1.0
Japanese	24,627	13.7	0	0	0§	0	0	0
Hawaiian and Part-Hawaiian	45,888	25.4	50	27.2	3.0//	22	12.0	18.7//
Filipino	22,014	12.2	8	9.1	1.0	4	4.5	7.1
Chinese	6,334	3.5	1	3.9	9.4	0	0	0
Samoan	4,661	2.6	18	96.5	10.8//	9	48.3	75.4//
Others	37,624	20.9	13	8.6	1.0	7	4.7	7.3
Total	**180,227**	**100.0**	**104**	**14.4**	...	**43**	**6.0**	...

*RF indicates rheumatic fever
†Average annual rate per 100,000 children
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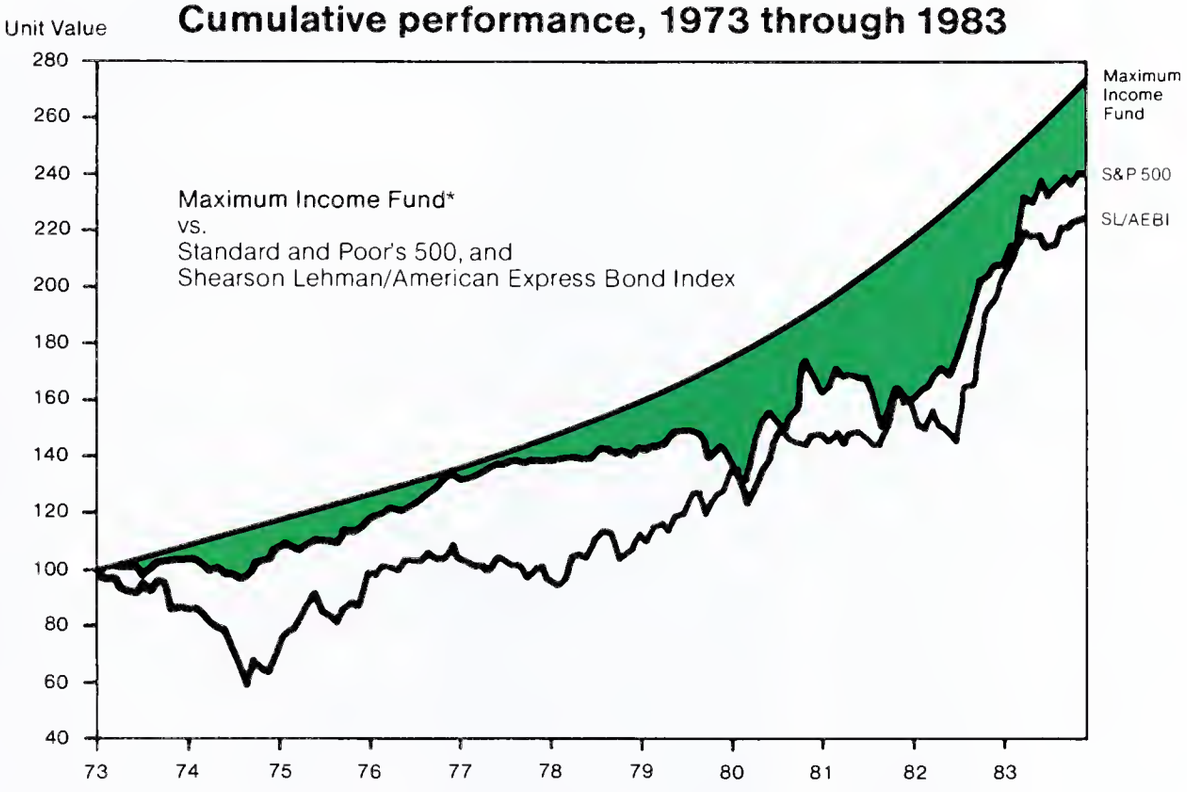
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Comment

Incidence rates of RF have been declining in the continental United States,[7-8] but in Hawaii, RF continues to be a significant problem. On Oahu, most of the cases of ARF are from the socially and economically depressed areas and where there is a proportionately greater population of Samoan and Hawaiian children. The relative risk of developing ARF among the Samoan children is 10.8 and that for the Hawaiian children is 3.0 as compared with the White children with a relative risk of 1.0.

Prior to the recent influx of Samoan families to Hawaii, the highest incidence rate of ARF was among the Hawaiians. We believe that the Samoan pattern of not seeking early health care services and their life-style contribute to their high medical risks.[9]

Our findings suggest the following measures to lower the incidence rate of RF in Hawaii.

1. Maximal preventive effort should be directed at those geographic areas with high incidence rate of RF.
2. Introduce medical education and aid the Samoan people to seek medical help early.
3. Improve the living conditions in those areas at high risk.

TABLE 2.

Incidence of RF in Participating and Nonparticipating Schools by Welfare Status of Children*

	Estimated Population	No. of RF Cases	Rate†
Welfare Children			
Participating schools	12,477	25	50.0
Nonparticipating schools	8,447	10	29.5
Nonwelfare Children			
Participating schools	51,007	11	5.4
Nonparticipating schools	50,293	19	9.5
Overall			
Participating schools	63,484	36	14.2‡
Nonparticipating schools	48,740	29	12.3‡

*RF indicates rheumatic fever. Patients were excluded for whom welfare status or school attendance information were missing.
†Annual incidence per 100,000 children enrolled.
‡Adjusted for proportion of children receiving welfare by the direct method with the use of the entire population as the standard.

TABLE 3.

Rheumatic Fever Rate Per 100,000 Per Year by Districts 3 to 18 Years — 1976-1980

District	Geographical Area	No. of Cases	Rate
I	Hawaii	4	10.5
III	Kaimuki	3	21.2
IV	Palolo	4	18.9
VI	McCully	2	9.4
VII	Waikiki	3	40.2
VIII	Kakaako	2	32.9
X	Kalihi	9	28.8
IX	Pauoa, Nuuanu	1	5.6
XI	Kapalama, Iwilei	13	29.0
XII	Hickam, Moanalua, Red Hill, Ft. Shafter, Aliamanu	3	5.4
XIII	Halawa Heights, Aiea	4	22.9
XIV	Pearl City	1	4.1
XVI	Waipahu	4	18.2
XVII	Ewa, Makakilo	6	20.8
XVIII	Waianae, Nanakuli	11	24.5
XIX	Wahiawa, Waipio, Wheeler AFB	3	4.5
XX	Schofield	1	2.8
XXI	Waialua, Haleiwa, North Shore	3	30.9
XXII	Laie, Hauula, Kaaawa	11	86.3
XXIII	Kaneohe, Kahaluu, Heeia	9	16.4
XXIV	Kailua	2	4.3
XXV	Waimanalo	3	24.0
	Honolulu (Area Not Specified)	2	

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We wish to thank Dr. Vincent A. Fulginiti for permission to reproduce Table I and II from the AJDC Vol. 126, May 1984.

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JUNE 1985
VOL. 44, NO. 6

Hawaii Medical Journal

CONTENTS

Editorials: 197
The Family Physician
The Physician Who Goes Bare
J.I. Frederick Reppun, MD

Inguinal Hernia Repair Using the Shouldice Technique 201
Salim Aziz, MD, Robert J. Simonds Jr., B.A. and
Wilfred T. Tashima, MD

Book Review 202
Sherrell L. Hammar, MD

Continuing Medical Education 205

HMA Council Meeting Highlights 206

Malpractice Insurance—What Can Happen if You Don't Have It 209
William S. Hunt, Esq., Honolulu

Smoking Control Programs on Oahu 210

Editorials: 211
This is My Mana'o
Be Your Own Editor

Letter to the Founding Editor 211
Frank B. Ramsey

Instructions to Authors 212

News & Notes 214
Henry Yokoyama, MD

Over the Editor's Desk 215

Fulminating Pulmonary Cryptococcosis Responsive to Sulfadiazine 216
D.G. Massey, MD, FRCPE, G. Ching, MD and D. Na'ai

Doctors Honor Students at Science Fair 218

Breast Cancer Treatment Alternatives 219

Biography—Herman Kramer, MD 222
Over 80 and Still Practicing

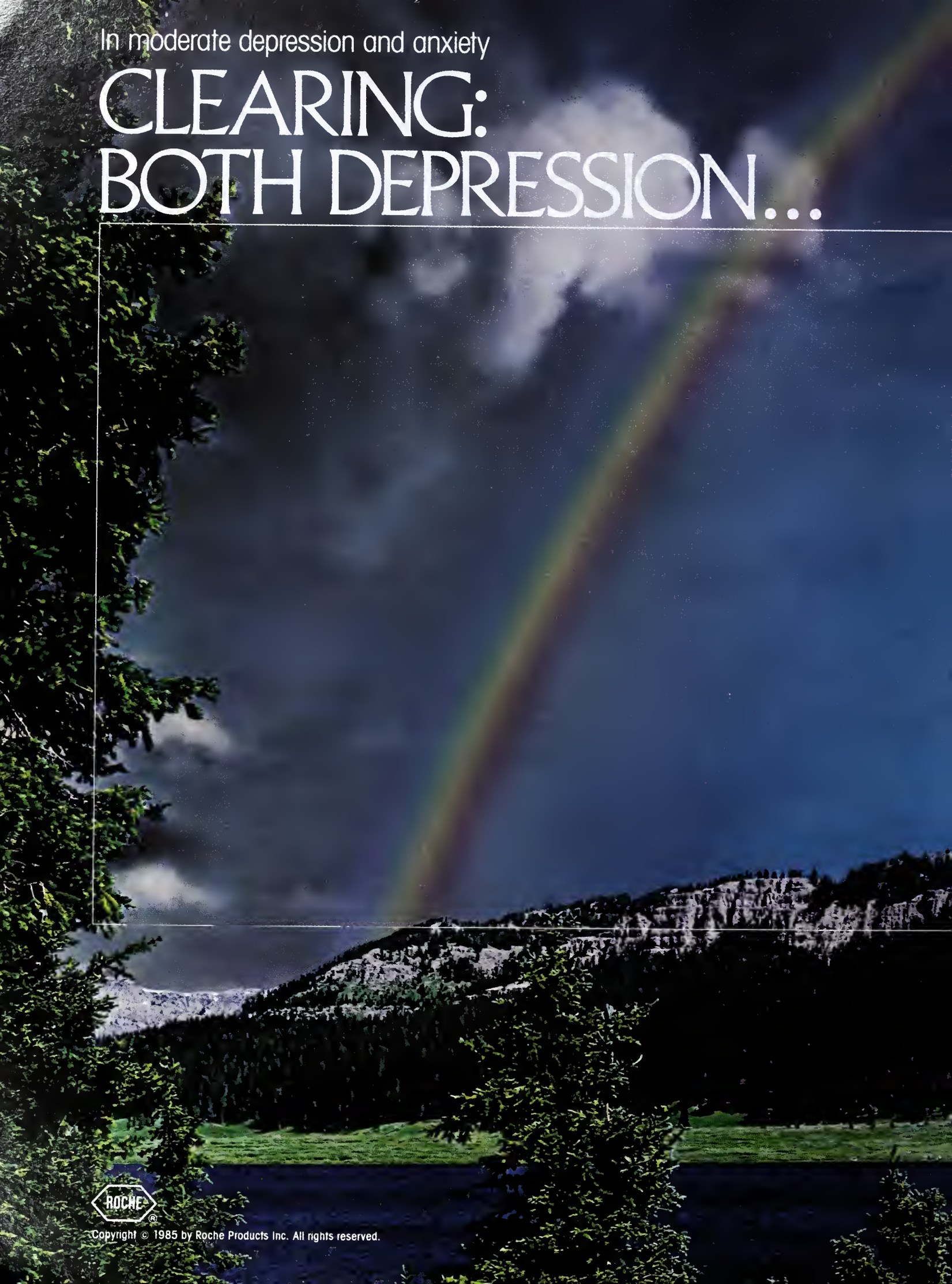
Publications of Interest 230

Hawaii Academy of Family Physicians' Newsletter 230
Don and Marlies Farrell

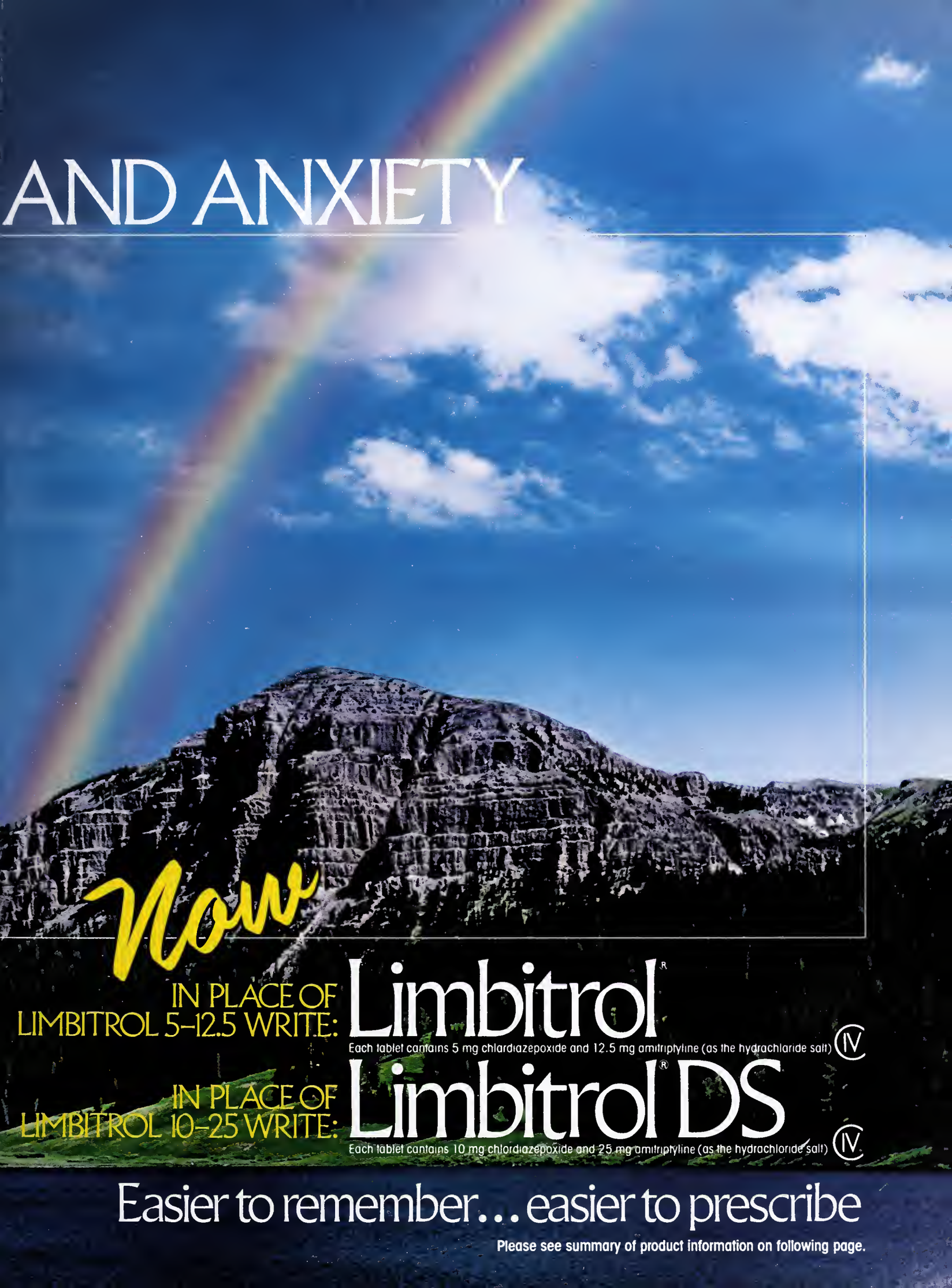
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Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
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The Family Physician

When the national president of the American Academy of Family Physicians (AAFP) installed the new officers of the Hawaii chapter (HAFP) at its annual meeting Feb. 16, 1985, he, of course, gave a speech. President Robert W. Higgins, M.D. capsulized recent trends in medicine with particular reference to the family physician.

The reader will remember, if he or she is far enough along in an established practice (ca. 10-15 years), that there was once a great push to educate and train more physicians in all specialties, and particularly in primary care medicine, in order that care would be more readily available in such places as Watts and The Bronx. "Primary care" physicians are FPs, pediatricians, and internists. The federal government got into the act perforce by giving grants generously — from the taxpayers' pockets, mind you — to students and to medical schools. "Expand, and crank out the M.D.s," was the dictum of that day. And it was done!

Is it a surprise, then, that there should come the day when now the nation is faced with a glut of physicians, most of them specialists?

Not really! The crank-out was done *by* specialists; medical school faculties are made up of specialists, by and large. The local medical school family practice curriculum never attained department status; the students interested in family practice got little encouragement and the whole thing petered out quite some time ago.

The only family practice residency program in Hawaii is at Tripler Army Medical Center, and it will be phased out in July 1986. The program at Kaiser died for lack of support on the part of the state and the medical community, and the *coup de grace* came when the feds ended the funding.

Nationally, even though a great many medical school graduates did get into the rapidly expanding number of slots in family practice residencies, the overall impact on medical manpower was not in the direction of the primary care pool of physicians — with one major exception: The rapid and considerable rise of emergency-room practice as a "specialty" absorbed a lot of young FPs.

"After so many years of this FP expansionist program," Dr. Higgins pointed out, "GMENAC now says that there is one FP to 3,700 persons in the United States as an average; in some states the ratio is 1:5,500." Higgins is hopeful, however, that this does not mean the FP is "on the way out."

For one thing, with specialization, sub-specialization, and super-specialization, coupled with the "in" thing: DRGs, cost-controls, etc., the FP already has the skills, by dint of his training, to become the patient's advocate as the patient tries to thread the maze of the new technology. The FP should be particularly able to assess the patient's comprehensive needs, bringing the whole family into the picture, and bringing in the problems of the workplace and of the community. The FP can help the patient make difficult decisions in this day and age of "informed consent," "second (why not 100?) opinions," "defensive (extra-costly) medicine" and the much greater self-responsibility. In fact, the FP can make life for the specialist that much easier, particularly in terms of protection against suit!

For another, there is more and more talk of the "gatekeeper concept" of cost control. The House of Delegates of the AMA, meeting in June 1984, adopted a resolution that asked its Council on Medical Services to monitor carefully "case management and primary care gatekeeper systems." At its interim meeting in Honolulu last December, the AMA adopted the report of the CMS and established a new policy statement that "it is advantageous," in view of the increased specialization of modern health care, "to have one individual with overall responsibility for the medical care of the patient."

It stands to reason that the family physician should assume this role. Therefore, there should be no holding back of his or her training in internal medicine in all its complexities, in pediatrics, in surgery, in obstetrics/gynecology, and in psychiatry during the formative years of preparation. The certification of an FP should open the door to hospital privileges — commensurate with training, experience, and observation — and to participation in modern team care of the patient.

If specialists and hospitals assess this development in medical care with tolerance and grace, the "gatekeeper" — a concept that generates revulsion in most medical circles, particularly if it is going to be mandated by government — may never come to exist.

By the way, the new officers of HAFP are President Bernard Chun, President-elect Lincoln Luke, Secretary Ken Steinweg and perennial Treasurer Don Farrell. We congratulate them on their election by their peers!

J.I.F. Reppun, M.D.

The Physician Who 'Goes Bare'

Attorney William S. Hunt warns of the consequences of a physician "going bare," an aphorism for not carrying medical malpractice insurance, in an article in this issue.

Some of Hunt's points are well taken; his arguments have the flavor of courtroom legalese without much of the befuddling jargon. Other points, however, leave room for rebuttal.

Before launching into specifics, we would like to comment that were it not for the joint-and-several liability clause in the tort law, nearly all physicians would have rather weak legs to stand on if those legs were "bare." By this, we mean that that physician who has not in the past, and who does not want to succumb to the pressures of "mandatory insurance" impositions of the present, might well be tempted to compromise his or her principles and go buy it if the cost were reasonable. It is the excessively high cost of the excessively high coverage that is the straw that's breaking the camel's back.

Despite plaintiffs' attorneys' claim to the contrary, this one factor is a major cause of the rise in cost of medical care. For example, one otolaryngological surgeon we know must pay $1,600 a month in order to be covered by a mandatory $500,000/$1,000,000 policy.

The particular argument we would like to offer here, with reference to Hunt's treatise, is that the physician who does *not* carry medical malpractice insurance and who refers patients to surgeons and obstetricians, yet continues to care for those patients in-hospital, is assuming a considerable risk himself, simply because that specialist and that hospital *do* have high coverage. The presence of that insurance *does* invite suit. The existing tort law implicates the referring physician who may be marginally, if not totally, innocent of wrongdoing.

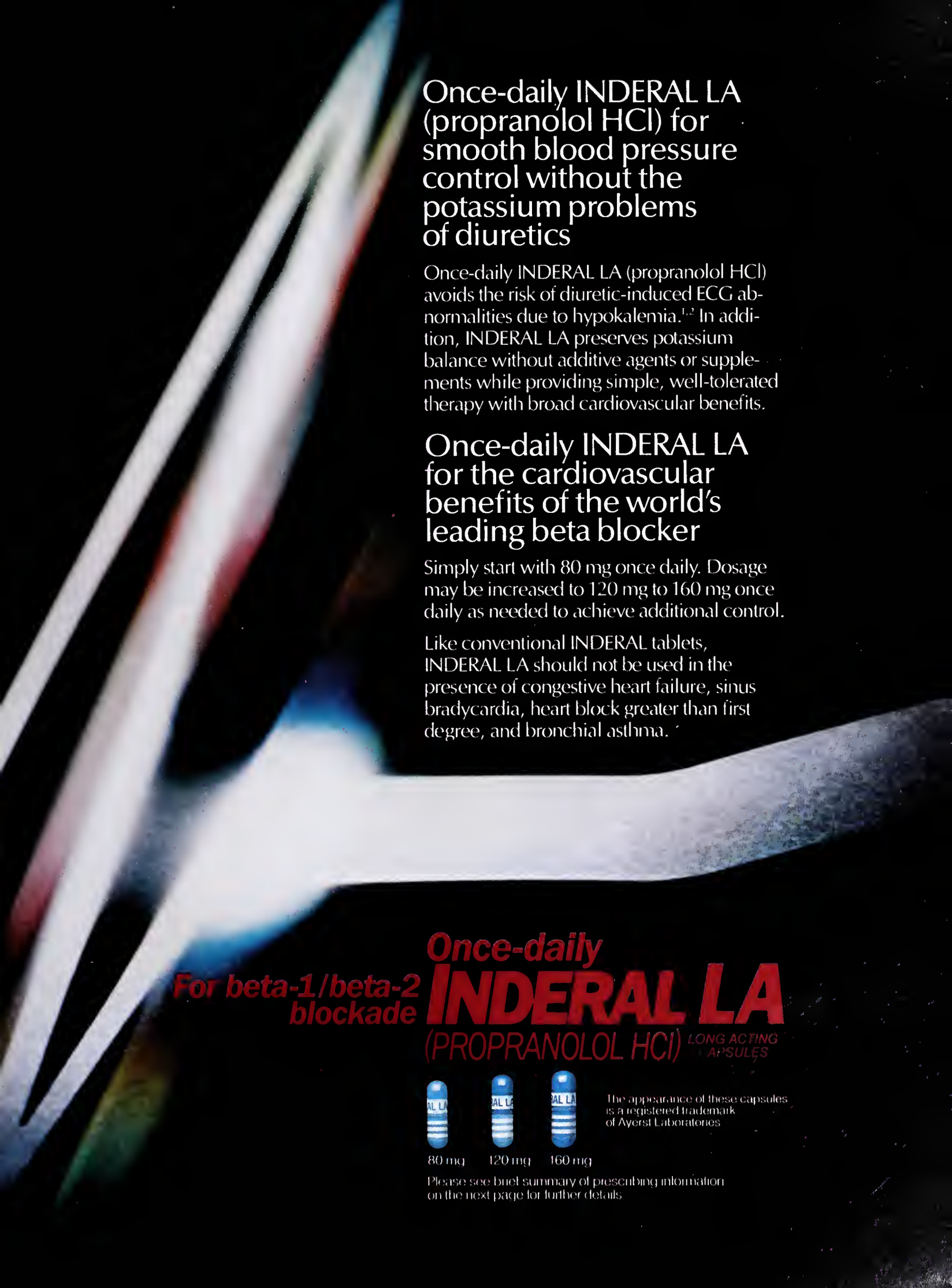
Apropos of this matter, the reader's attention is drawn to the closing statements in the biography of an honored senior member of our profession, a global physician, Harry Kramer, also in this issue of the JOURNAL.

J.I.F. Reppun, M.D.

(Continued on page 211)

Right from the start in hypertension...





Once-daily INDERAL LA (propranolol HCl) for smooth blood pressure control without the potassium problems of diuretics

Once-daily INDERAL LA (propranolol HCl) avoids the risk of diuretic-induced ECG abnormalities due to hypokalemia.[1,2] In addition, INDERAL LA preserves potassium balance without additive agents or supplements while providing simple, well-tolerated therapy with broad cardiovascular benefits.

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Simply start with 80 mg once daily. Dosage may be increased to 120 mg to 160 mg once daily as needed to achieve additional control.

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80 mg 120 mg 160 mg

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Please see brief summary of prescribing information on the next page for further details

Once-daily
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(PROPRANOLOL HCl) LONG ACTING CAPSULES



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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*
INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**
DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.
CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.
INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.
CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.
WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.
PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.
ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue; reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.
DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.
PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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Inguinal Hernia Repair Using the Shouldice Technique —

An Experience of 101 Cases

Salim Aziz, M.D.,* Robert J. Simonds Jr., B.A.,** and Wilfred T. Tashima, M.D.†

• *The incidence of inguinal hernias in the adult population of the United States is said to be 40 per 1000, with 90% of these occurring in males. Two-thirds of inguinal hernias are indirect hernias, and of these, 49% occur on the right side, 38% on the left side, and 13% occur bilaterally. Direct hernias are found in association with indirect hernias in 7% of cases.*[1]

More than 500,000 inguinal herniorrhaphies are performed yearly in the United States, with an average hospital stay of 4.8 days.[2] The annual hospital costs of inguinal hernia repair are estimated to be more than $750 million.[3] This obviously poses a considerable burden on hospital resources and has led to an increasing advocacy of shorter stays for hernia repair and even repair on an out-patient basis.[4, 5]

Of the various methods of hernia repair described in the literature, the Shouldice repair is the one which is said to have the lowest incidence of recurrence. Different series describe recurrence rates of 0.6% to 2%.[6, 7] In Hawaii, the first routine use of the technique of Shouldice repair was at the Kaiser Foundation Hospital in 1976. Since then, more than 120 such repairs have been performed successfully there.

We reviewed the outcome of all patients who had a Shouldice repair performed at Kaiser, and report here on the follow-up of patients followed post-operatively for 6 months or longer.

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Methods

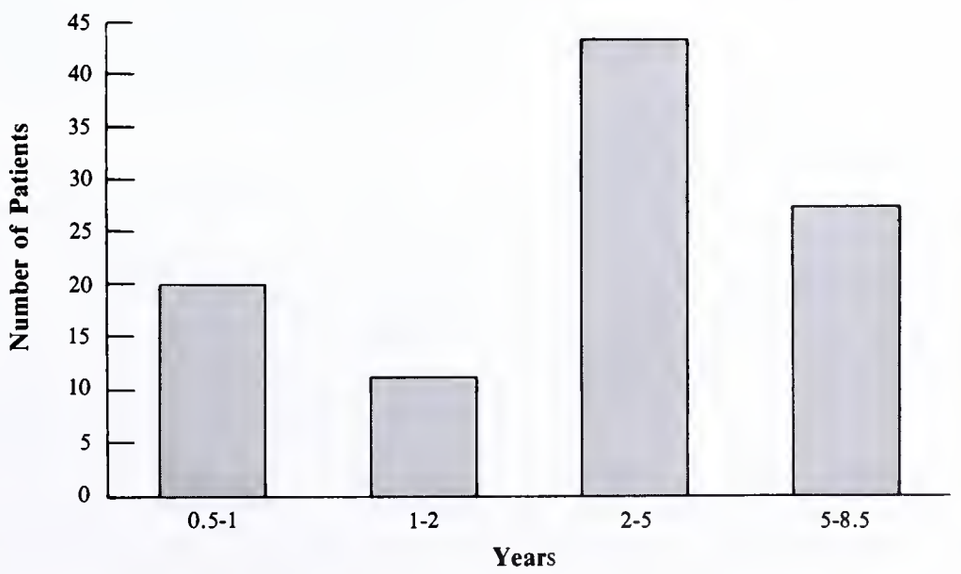
We reviewed the charts and interviewed by telephone or mail 93 patients who had a total of 101 inguinal hernias repaired by the Shouldice technique between February 1976 and June 1984 at the Kaiser Foundation Hospital, by or under the supervision of an attending surgeon.

Charts were reviewed for results of follow-up exams and patients were queried with regard to recurrence, pain or other complications.

Patients ranged between 18 and 83 years of age (average age 55.1 years); all were male. Eight of the patients had had a previous non-Shouldice repair performed and had a recurrence. There were 36 direct, 48 indirect, and 17 both direct and indirect hernias. 45 patients had right-sided hernias, 40 had left-sided, and 8 had bilateral hernias that were repaired at the same time.

Of the repairs, 79 were done under

TABLE 1.
Length of Patient Follow-Up After Hernia Repair, Years



spinal anesthesia and 23 were done under general anesthesia. The technique of repair was similar to that described by the Shouldice Clinic[7, 8]; however, in this series 2-0 Ethibond was used for the transversalis fascial layer repair.

Results

Follow-up time ranged from 6 months to 8½ years (See table 1). Patients with less than six months' follow-up were excluded from this study. There were no recurrences in this subset.

Of the 101 cases examined, there were two recurrences. One occurred in a 62-year-old man 12 months after repair of a left indirect hernia under spinal anesthesia. He refused subsequent repair. The second occurred in a 61-year-old man 10 months following repair under general anesthesia of a right direct hernia which had been repaired twice before, using different techniques. It was repaired again. Thus, the recurrence rate in this series is 2%.

There were 7 post-operative complications among the 101 cases. Four patients had wound infections, and one patient each had urinary retention, ileus, and atrial fibrillation. There was no mortality incidental to the surgery.

More than 80% of the patients were discharged by the third post-operative day (See table 2), with an average post-operative length of stay of 2.7 days.

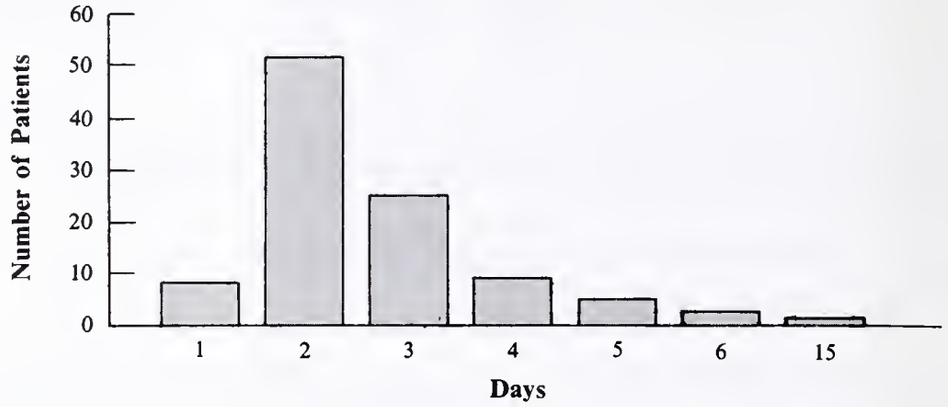
Discussion

That hernias are an important source of discomfort and disability is well recognized. We believe that unless severe contra-indications exist, all patients with an inguinal hernia should be offered operative intervention. Strangulation and incarceration are uncommon but are life-threatening complications of unrepaired inguinal hernias.

We have found that the best muscle relaxation and operative exposure with minimal patient discomfort is achieved using spinal or general anesthesia. Our length of hospital stay, 2.7 days, is considerably below the reported national average for hernia repair.

Plans are under way to perform this procedure on an outpatient basis using local anesthesia as advocated by some.[4, 6, 9]

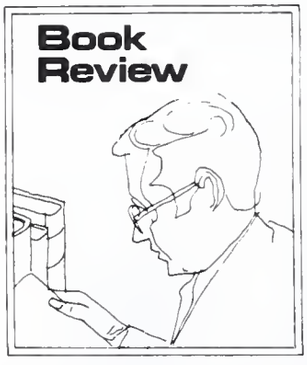
TABLE 2.
Length of Hospital Stay Following Hernia Repair, Days



Recurrence rates following repair of inguinal hernias using all techniques are said to vary from 2% to 40%.[10] In this series, the recurrence rate was 2%. This is in keeping with the low recurrence rates reported by other authors using the Shouldice repair. It attests to the technique's efficacy.

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Handbook of Pediatrics; 14th Edition; Henry K. Silver, C. Henry Kempe, and H.B. Bruyn, Lang Medical Publications, Los Altos, Calif. $13.

Since its first appearance in 1955, this little handbook has been regularly updated and substantially revised. It is a compendium of practical and useful pediatric information presented in a well organized format, for students, house officers, and practicing physicians.

It is probably one of the oldest and best known of the pediatric handbooks; like all handbooks, it should not be used as a substitute for a complete pediatric text or reference.

Chapters on pediatric history, physical examination, management of illness, development, and nutrition provide helpful information. The chapter on antimicrobial therapy will leave the reader desiring a more accessible and complete guideline for drug dosages.

There are chapters on general care of the newborn followed by a section on diseases and disorders of the newborn, which are reasonably complete for a handbook. The chapters on emotional problems and adolescence are very brief and leave the reader feeling incomplete. These areas do not lend themselves to a handbook approach.

The major section of the book is devoted to a systemic and organ approach to pediatric disorders and diseases. These are organized for easy reference and reading.

A large section is devoted to infectious diseases and there is an interesting and useful section on pediatric emergencies. Chapter 32 is devoted to pediatric procedures, some of which are interesting only from a historical perspective.

The appendix contains much useful information including lists of differential diagnosis of common signs and symptoms. Although some inaccuracies are evident, in general, this is a well written and well organized handbook, which basically adheres to the editor's specified objective of being a quick pediatric reference for health professionals.

Sherrell L. Hammar, M.D.
John A. Burns
School of Medicine

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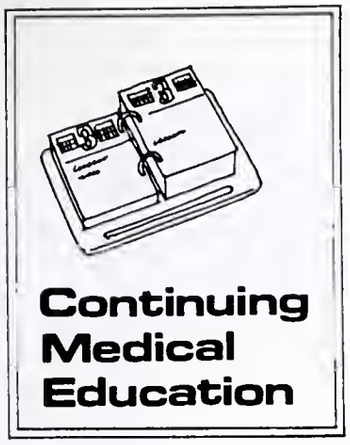
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329-5291 (Kailua-Kona)



Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

For a complete list of ongoing programs, please refer to the March 1985 issue of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

July 8-12, 1985	International Congress on Radiology, Hawaii Radiology Congress, Sue O'Malley. Travel Agent: Passport Travel, 6340 Glenwood, Clover Leaf, Bldg. #7, Overland Park, Kansas 66202. Location: The Westin Ilikai Hotel, Honolulu.
July 13-20, 1985	Cardiovascular Medicine and Surgery, Stanford University Medical Center, Office of Postgraduate Medical Education, Room TC 129, Stanford, Calif. 94305, (415) 497-5594. Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
July 19-26, 1985	The First Annual Alaska Hawaii Seminar — The Restructuring of Medicine, Pacific Health Research Institute, Thomas Square Centre, 846 S. Hotel St., Suite 303, Honolulu, Hawaii 96813, 524-4411, Wally M. Izumigawa. Location: Prince of Wales Island, Alaska.
July 24-26, 1985	Strategic Therapy, Kahi Mohala Healthcare Learning Institute, P.O. Box 1358, Ewa Beach, Hawaii 96706, 671-8511, Dana Zichittella. Location: Hawaiian Regent Hotel, Honolulu.
July 20-27, 1985	Innovations in Primary Care IV: Topics of Concern in the '80s, New York Medical College, Department of Pediatrics, Valhalla, N.Y., (800) 645-2200. Location: the SS Independence (cruise among Hawaiian Islands).
Aug. 5-9, 1985	ECG Interpretation and Arrhythmia Management, International Medical Education Corp., 64 Inverness Drive East, Englewood, Colo. 80112, (800) 525-8651, Beverly Jacobsen. Location: Waikiki.
Aug. 9-13, 1985	Advances in Internal Medicine, American College of Physicians, (800) 523-1546, Official Travel Agent: GTU, INC., P.O. Box 2198, Honolulu, Hawaii 96805, 922-0844. Location: Stouffer's Wailea Beach Resort, Maui.
Aug. 9-18, 1985	Conference on Clinical Anesthesia, Educational Programs Division of the California Society of Anesthesiologists, (415) 348-1407, Location: Maui.
Aug. 10-17, 1985	Ophthalmology, USC School of Medicine, Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929 (Calif.), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa St., Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511 (Calif.), (213) 746-1384. Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
Aug. 10-21, 1985	28th Annual Hawaii Refresher, USC School of Medicine Postgraduate Division, 2025 Zonal Avenue, KAM 307, Los Angeles, Calif. 90033, (800) 421-6729, (800) 321-1929 (Calif.), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa St., Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511 (Calif.), (213) 746-1384. Locations: Sheraton Waikiki and Maui Marriott.
Aug. 16-19, 1985	Neuropsychological Testing: A Workshop on Application, Techniques, and Indications, Southern California Neuropsychiatric Institute, (619) 454-2102, Location: Poipu Beach, Kauai.
Aug. 25-28, 1985	Aging: Neuropsychiatric Considerations XII Annual Symposium, Southern California Neuropsychiatric Institute, Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
Aug. 28-Sept. 1, 1985	Controversies in Urology, American Urological Association, (713) 791-1470, Location: Sheraton Waikiki Hotel.
Sept. 9-13, 1985	First Annual Masters International Diagnostic Radiology Conference, Maurice Reeder, M.D., 1356 Lusitana Street, #502, Honolulu, Hawaii 96813, 531-6471. Location: Baden Baden, West Germany.
Sept. 14-21, 1985	Topics in Emergency Medicine, State University of New York, Downstate Medical Center and International Conferences, 189 Lodge Avenue, Huntington Station, N.Y. 11746, (516) 549-0869. Location: SS Constitution (cruise among Hawaiian Islands).
Sept. 25-30, 1985	Association of American Physicians and Surgeons, Inc., 5201 Lyngate Circle, Burke, Va. 22015, Sue Ackley, (703) 425-6300. Location: Hotel Inter-Continental, Maui.
Sept. 28-29, 1985	First Responders Treatment of Burn Patients, Straub Clinic and Hospital, 888 South King Street, Honolulu, Hawaii 96813, Mrs. Joan White, 523-2311. Location: Honolulu.
Sept. 29-Oct. 4, 1985	Symposium on the Prevention of Osteoporosis, Conference Coordinator, Osteoporosis Center, Kuakini Medical Center, 347 North Kuakini Street, Honolulu, Hawaii 96817, 547-9578. Location: Westin Ilikai Hotel, Honolulu.

Sept. 29-Oct. 4, 1985	Congress of Neurological Surgeons, University of Maryland Hospital, 22 South Green, Baltimore, Md. 21201, Michael Salcman, M.D., (301) 528-2905, Location: Sheraton Waikiki Hotel.
Oct. 12-19, 1985	Gastroenterology: A Review, State University of New York, Downstate Medical Center and International Conferences, 189 Lodge Avenue, Huntington Station, N.Y. 11746, (516) 549-0869. Location: SS Constitution (cruise among Hawaiian Islands).
Oct. 12-20, 1985	Annual International Body Imaging Conference, Department of Radiology, West Park Hospital, 22141 Roscoe Boulevard, Canoga Park, Calif. 91304, (818) 340-0580. Travel Agent: Innovations in Travel, 9545 Reseda Boulevard, Northridge, Calif. 91324, (818) 701-1164. Location: Maui Marriott Hotel.
Oct. 12-14, 1985	129th Annual Scientific Meeting, Hawaii Medical Association, Jennie Asato, HMA, 320 Ward Avenue, Suite 200, Honolulu, Hawaii 96814, 536-7702. Location: Kona Surf Resort, Kona, Hawaii.
Oct. 19-26, 1985	Operative Arthroscopy, University of California at Los Angeles, Continuing Education in Health Sciences, 10995 Le Conte Avenue, Room 614, Los Angeles, Calif. 90024, (214) 825-8423. Location: Maui Marriott Hotel.
Oct. 19-22, 1985	New Approaches to the Evaluation of Neoplastic Lymphoproliferative Disorders, University of Southern California, Department of Pathology, 2025 Zonal Avenue, Los Angeles, Calif. 90033, (213) 224-7121. Location: Wailea Beach Hotel, Maui.
Oct. 31-Nov. 2, 1985	Moral Issues in Medicine, National Federation of Catholic Physicians' Guilds, St. Francis Hospital, 2230 Liliha St., Honolulu, Hawaii 96817, Gail Okamura, Director of Education, 547-6410. Location: Hilton Hawaiian Village, Honolulu.
Nov. 1-2, 1985	Cost/Quality Assurance Issues in Medicine Today, Straub Clinic and Hospital, 888 South King Street, Honolulu Hawaii 96813, Joan White, 523-2311. Location: Honolulu.
Nov. 1-6, 1985	ACOG District VIII Meeting, American College of OB/Gyn, 600 Maryland Avenue S.W., Washington, D.C. 20024-2558. (202) 638-5577. Location: Hyatt Regency Maui.
Nov. 18-20, 1985	Hawaii Pediatric Gastroenterology Conference, Delia Chang, Continuing Medical Education, 1319 Punahou Street, #816, Honolulu, Hawaii 96826, 948-6949. Location: Kapiolani Women's and Children's Medical Center, Honolulu.
Dec. 26-30, 1985	Allergy, Drugs, and Drug Allergies, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Attention: Joe Harrison, M.D., 879-8182 or 661-8032. Location: Royal Lahaina Resort, Maui.
Jan. 1-4, 1986	Rheumatology and Immunology Symposium Maui, Inc., P.O. Box 10185, Lahina, Hawaii, 96761 Attention: Joe Harrison, M.D., 879-8182 or 661-8032. Location: Royal Lahaina Resort, Lahaina, Maui.
Jan. 13-17, 1986	Pan Pacific Surgical Association, Charlotte Winget, P.O. Box 553, Honolulu, Hawaii 96809, 523-8978. Location: Sheraton Waikiki.
Jan. 18-25, 1986	Seventh Annual Royal Hawaiian Eye Meeting, Chuck Williams, Hawaiian Eye Foundation, 1600 Ala Moana, #1902, Honolulu, Hawaii, 955-1708. Location: Royal Lahaina Resort, Maui.
Jan. 27-31, 1986	The Fourth Annual Hawaii Conference on Gastrointestinal and Hepatic Diseases, Gary Glober, M.D., 1380 Lusitana Street, #701, Honolulu, Hawaii 96813, 536-1021, Location: Mauna Kea Beach Hotel, Kohala, Hawaii.

Capsule of the HMA Council Meeting of March 8, 1985

by Marilyn Lindsey, HMA Secretary

• The Finance Committee is defining criteria for establishing financial reserves for HMA.

• Dues Incentive Membership Recruitment will continue through 1985. AMA also will be asked to continue its participation in the program.

• Total membership as of Feb. 28, 1985, was 1,507. Dues collection as of the end of February is ahead of schedule. Council noted that improved collection may be reflective of the Association's new dues billing system, although final collection results will not be available until after the March 31 deadline.

• Drs. William Hindle, William Dang, and William Goebert and Tom Rice (legal counsel) and Jon Won were HMA's representatives at the Medical Insurance Exchange of California Defense Counsel Seminar, Feb. 22 through 24 in San Francisco.

• Testing for AIDS in all blood and blood donors already has begun on the Mainland and soon will be started locally.

• Appointed to represent the Department of Health on the HMA Cancer Commission were Drs. Lindsay Jack Kirkham and Elisabeth Anderson.

• Rodney Harano, HMA's director of financial affairs, recently resigned to pursue his own CPA business. At this time the position will be left vacant with direct financial supervision by Nelson Jones, assistant executive director of operations.

• HMA lobbyist Becky Kendro briefed council on the status of health bills in the state legislature. She regularly covers details of these bills in the legislative round-up mailed to all members.

• Dr. Minolu Cheng was elected to the council to fill the unexpired term of Dr. Robert Laird, who was installed as president of the West Hawaii Medical Society at its annual meeting in January.

• Peer Review Organization Associate Director Dave Calhoun, Review Manager Barbara Baker, and Quality Assurance Manager-Arizona Nadine Harris met with the local physician advisers at HMA on Feb. 28. A steering committee was elected; Dr. James Stewart was voted chairman, and Dr. Robert Flair, vice chairman. Neighbor island physicians will be contacted soon for review of charts and consultants.

• NORCAL Mutual-San Francisco is interested in expanding its malpractice liability insurance market to Hawaii. MIEC and HMA agree it is in the best interest of physicians to have alternative markets available for liability coverage.



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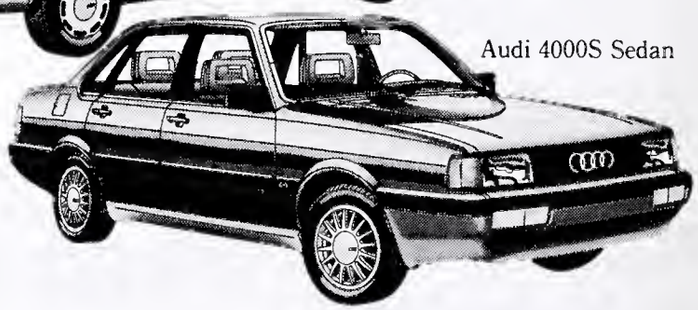
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Malpractice Insurance — What Can Happen if You Don't Have It

William S. Hunt, Esq.,* Honolulu

• *Perhaps the primary concern of practicing physicians today is the cost of premiums for medical malpractice insurance. As all physicians know, due to a number of factors, premiums are increasing each year, and the likelihood that they will level off in the near future appears slim. In response to this situation, a number of doctors are presently contemplating, or have already decided, to practice without medical malpractice insurance protection. This article discusses the risks involved in taking such action.*

Since nearly all medical malpractice claims are based on a negligent act, some physicians may be under the impression that if they are careful, they will not be sued.

Unfortunately, this is not necessarily so. Any attorney with experience in medical malpractice litigation is aware that a great number of claims result as much from a lack of communication with the patient as from actionable negligence.

Although the physician may eventually convince the patient and his attorney that a bad result was not his or her fault, it may require a trial and jury verdict to do so. Thus, simply relying upon caution and perhaps luck is no guarantee you won't become a defendant in a malpractice action, regardless of your specialty.

A physician who has no insurance, and is sued, faces two avenues of financial exposure: First, certain and often substantial attorneys' fees and costs; and second, a less-certain but frequently substantial payment of a settlement or judgment. Depending on the particular case, either or both of these can be overwhelming.

Hawaii Revised Statutes, Chap. 671, *et. seq.*, deals with medical torts and provides that any person who alleges he is a victim of "professional negligence" must file a claim with the Medical Claim Conciliation Panel. A decision must be rendered by the panel before he may file a lawsuit.

Thus, a defendant physician may require the services of an attorney for two proceedings, the panel hearing and the ultimate trial, if there is one. The panel hearings are more informal and don't require as much preparation as a trial, but attorneys' fees and costs for defending a case before the panel nevertheless can reach several thousand dollars.

Although the panel has returned decisions in favor of the physician a majority of the time, this does not prevent the plaintiff from then filing a lawsuit.

Once a lawsuit is filed, defense attorneys' fees and costs and expert witness fees can quickly exceed the amount spent for a defense at the panel hearing. Thus, even if a plaintiff withdraws his claim, or agrees to settle for a nominal amount, the physician usually will have expended thousands of dollars in attorneys' fees that are not generally recoverable from the plaintiff.

Some physicians are attempting to deal with the problem of attorneys' fees by organizing physician-run associations that provide funds for the defense of a member who is sued, often up to a certain maximum amount. Such entities do not offer coverage for payment of settlements or judgments, as would the usual insurance policy.

Since some amount of payment is made by the defendant physician for settlement or judgment in a number of the cases filed, joining such a protective association reduces the risk of substantial out-of-pocket payments by the individual physician.

In addition to the likelihood of having to pay attorneys' fees and the possiblity of a judgment against him for his negligence, the physician without insurance also faces the possibility of being held responsible for payment of compensation for injuries jointly caused by the negligence of another doctor, or by a member of the hospital's staff, such as nurses, technicians, and others. Under the Hawaii Uniform Contribution Among Tortfeasors Act, HRS § 663-11, *et seq.*, each defendant found, after a trial, to be jointly liable with another defendant can be required to pay the entire judgment to the plaintiff by himself.

In other words, if a plaintiff wins a verdict for $100,000 and you are found to be only 1% at fault, and your co-defendants are found 99% at fault, the plaintiff can nevertheless *collect the entire judgment amount from you.* It would then be up to you to collect contribution or reimbursement from the other defendants, if they have the money.

The theory behind this law is that the plaintiff who has been injured and is found to be entitled to compensation should not be denied that compensation as long as at least one of the responsible defendants has the ability to pay it.

Many hospitals now require physicians to carry medical malpractice insurance before being given privileges to practice at that hospital, to ensure that the doctor will be able to contribute his or her share of any judgment based upon the joint liability of the doctors and hospital.

Similarly, individual physicians who have substantial assets but no insurance coverage may be required to pay a large

*The author, a graduate of Columbia University School of Law, is an officer and director of the Honolulu law firm of Paul, Johnson & Alston, and has practiced law in Honolulu since 1972. He has served as chairman of numerous medical claim conciliation panels. His wife, Joyce, is a graduate of the John A. Burns School of Medicine and is in residency training in obstetrics and gynecology at Kapiolani Women's and Children's Medical Center

Accepted for publication April 1985.

judgment, even though that physician was not primarily — or even significantly — responsible for the patient's injury, because the other co-defendants cannot pay their share.

Once a judgment is obtained against an uninsured physician, there are several means available to the plaintiff in collecting it. Most often, the plaintiff's attorney will conduct an "Examination of Judgment Debtor." This procedure requires a defendant who has had a judgment entered against him to answer questions under oath concerning his income and assets.

Generally, any assets held by the defendant individually, or even jointly with another, may be attached, pursuant to procedures supervised by the court, and used to pay the judgment.

The major exception to this is property held in "tenancy by the entirety." Tenancy by the entirety refers to assets owned jointly by a husband and wife. Although it is a term generally used with regard to land, it is also applicable to other assets, such as bank accounts and automobiles.

Thus, while a judgment creditor may be able to attach the usual bank account opened jointly by a husband and wife, this would not necessarily be the case with an account held by them as tenants by the entirety.

Of course, there are exceptions to every rule. The protection of tenancy by the entirety does not apply to existing debts on property owned by one spouse and then transferred into ownership in tenancy by the entirety.

Also, it may not apply in situations where the spouse transfers the property in anticipation of a specific adverse judgment. Depending upon the circumstances, a court could find such a transfer as a fraud upon creditors and allow the property to be attached anyway.

Even if a physician has no attachable assets, a plaintiff may be able to collect a judgment by garnishment of the physician's future income.

This is easier to do if the physician is employed by a group or other entity that has a separate payroll department. Even with self-employed physicians, a diligent plaintiff's attorney would not have great difficulty in obtaining a court order requiring the physician to pay the plaintiff a significant percentage of his monthly income until the judgment is satisfied.

Furthermore, an individual physician is not protected from such garnishment merely because he is an employee of his own corporation. While incorporating may have other benefits, it will not shield a physician from a claim based upon professional negligence.

The final defense of an uninsured physician against a large personal injury judgment is to declare personal bankruptcy. Although bankruptcy law is a highly specialized area fraught with exceptions and exclusions, it generally can be said that a personal injury judgment may be avoided by filing for personal bankruptcy. This alternative has many drawbacks, since it generally requires selling off most of the physician's assets and does significant damage to the physician's reputation and credit. Also, by law, it can be done only once every 6 years.

In summary, there are serious risks involved in practicing without malpractice insurance, and although some of them can be reduced with careful planning, they are still substantial and cannot be eliminated.

Oahu Smoking Control Programs

This list has been compiled by the Hawaii Interagency Council on Smoking and Health (ICOSH) for your information. Smoking cessation programs are not listed in any particular order. No ranking is implied, and information provided does not represent ICOSH endorsement of any of the below-listed programs.

American Cancer Society Quit Smoke Clinic Program (FreshStart)

Method:	FreshStart is a realistic program that helps one to understand and deal with smoking as a chemical addiction, as a habit, and as a psychological dependency. It uses group interaction to encourage and support change without the use of gimmicks or non-essential elements, meaningless activities, or busywork. FreshStart emphasizes that stopping smoking is a two-part process: i.e., stopping and staying stopped, and it offers strategies for conquering smoking in one's thoughts, feelings, and actions.
Duration:	Usual format is a two-hour session twice a week for two weeks
Class Size:	12 to 25 participants
Location:	Varies to fit need
Registration:	Call 531-1662
Fee:	Free

Castle Memorial Hospital Five-Day Plan to Stop Smoking

Method:	A "cold turkey" crash course emphasizing the role of nutrition and importance of exercise. Physicians and other health professionals present lectures, films, and discussions of ways to quit smoking. Every registrant is given a Lung Function Test. Each individual has a "buddy" and is encouraged to maintain contact after the class is over.
Duration:	Five consecutive evenings (Sunday to Thursday, 7-8:30)
Class Size:	Usually 25 to 30 (up to 50), open
Location:	Several locations on Oahu. Call number below for information
Registration:	Call Castle Memorial Hospital, Health Education Department, 263-5500, ext. 287
Fee:	$49

Straub Clinic Stop Smoking Program

Method:	Participants learn about their individual smoking habits; then about different methods that may help them quit. Behavioral modification with positive reinforcement is employed. Participants phone in weekly for follow-up until projected goal is reached.
Duration:	Two appointments, one hour each, approximately one week apart
Class Size:	Individuals only
Location:	Straub Clinic, Honolulu, and at satellite clinics in Aiea, Hawaii Kai, and Kailua
Registration:	Call Lindsay Dodge, health educator, 523-2311, ext. 8325

Department of Health Smoking Education Program

Method:	This program helps smokers to quit on their own and discourages nonsmokers from taking up the habit by providing counseling, literature, and audiovisual materials. The materials describe the effects of smoking and provide specific techniques for smoking cessation.
Location:	1250 Punchbowl Street, Honolulu 96801
Registration:	Call Marion Akamine, 548-5886
Fee:	Free

For further information on ICOSH services and activities, call the Cancer Information Service at 524-1234. Neighbor Islands — call collect.

HMA is a member of ICOSH.

Editorials

(Continued from page 197)

This is My *Mana'o*

From my vantage point as ombudsman and non-voting member of the HMA Council at its meeting on April 5, I gathered that:

Bill Hindle runs a remarkably well-organized and informative meeting of the leadership of the Association each month.

A slide show based on data compiled by the AMA told us that physicians' patient-loads are increasing. How strange, in view of the alleged glut of doctors! The AMA says that about 30% of physicians have joined HMOs or the like; that 25% of doctors still make house calls, but the number who do so is declining (the oldsters are dying off, methinks); that the general public's best guess is that the average physician's income is $110,000 a year.

It was announced, and no one voiced opposition, that henceforth there would not be any smoking allowed on HMA premises. (Two tiny ashtrays full of butts catch one's eye as they rest, lonely and forlorn, at the foot of the railing near the entrance to Suite 200!)

State Rep. Whitney Anderson has introduced a resolution honoring our George Mills for receiving the Rush Award, reflecting honor on Hawaii and on Hawaiians as well.

Another slide show, this one on the medical malpractice insurance issue: In 1982, 46% of M.D.s in Illinois were sued for malpractice. Also, 35% of all lab and other tests are being ordered in the name of "defensive medicine." President Hindle pointed out that it is a problem of liability in general, involving a wide range of human enterprise and functions in our society; it is not a problem for the medical profession alone. Therefore, we should take heart, and join forces with business, labor and the consumers in devising a better way to go.

Becky Kendro reported to the Council: "We won a victory of considerable sorts at the legislative hearing on HCR 95 on THE issue." As a result, the state Senate will be studying the tort-feasor aspect of the law, and make a report at the next session. The House will obtain and study the data on the Hawaii experience with medical malpractice that the Department of Commerce and Consumer Affairs has not seen fit to release, in apparent violation of existing statutes, and also will report to the regular session of 1986.

J.I.F. Reppun, M.D.

Be Your Own Editor

Dear Reader:

The world is full of news. The media are replete with verbiage, both spoken and written. You have to hack your way through this jungle in order to find some kind of pathway.

In this overwhelming assault on our senses, to which we are all subjected from morning till night — in fact, all night long, too — it seems that one can turn off the auditory more easily than the visual perceptors.

In our household, we get both The Honolulu Advertiser and the Honolulu Star-Bulletin. Why? Because the several members of the ohana have differing tastes and because we don't have the gumption to cancel one or the other. We read both, back to front of course, scanning captions and headlines, then reading in depth what catches the eye. But how terrible if, by simply doing that, we might miss a real pearl?

It is the same with the medical journals: Stacks of them accumulate, mostly the throw-aways. Each and every one of them tries to catch the eye — by shape, by design, by color, or by graphics.

How does The JOURNAL — your HAWAII MEDICAL JOURNAL — catch your eye? Do you scan its contents, if nothing else? We'd like your honest opinion on it; call or write.

Better yet, get into the act. Of course we welcome the scientific articles, the results of your professional work in research and in local patient care, but please don't hesitate to write an essay or treatise, short or long, on your favorite professional peeve, or on current medical controversy, or your views on issues of medico-socio-economics. Your expressed opinions in a form other than in a letter-to-the-editor is what we would be glad to receive. Write an editorial yourself on a topic about which you feel strongly.

First, some caveats; second, a plea.

We reserve the right to edit your "editorials," just as we reserve the right to edit articles of any sort that are submitted to us. Please remember that we are restricted in space; we may not exceed the space allotted on the basis of the column inches paid for by the ads. The publisher holds the reins. Therefore, it is we, the staffers and editors at the HMA, who must try to juggle, pare, trim, cut, and fit as much copy as we can into the "editorial space" in each monthly issue — the space that is not taken up by the financially supporting ads.

Our plea to those of you who would accept this offer to "be your own editor" is to pretty please send us your "hard copy" double-spaced with proper spelling, grammar, and punctuation.

Any physician/member looking to practice medical journalism as an avocation? Please step forward. You will be very welcome at HMJ. The pay? $0,000,000.00!

J.I.F. Reppun, M.D.



Letter to the Founding Editor

Dear Dr. Arnold:

I have always enjoyed the HAWAII MEDICAL JOURNAL, have profited from reading it and enjoyed your editorials. Not to mention also your founding, administrative, and medical accomplishments during the JOURNAL's long existence.

Now comes the time to acknowledge and accept your retirement (possible partial retirement) as editor. I have never tallied the services of all the various editors of state medical publications, but actually do not need to, to realize your tremendous contributions from the founding and all through the many years of a great journal.

Please accept my salutations and congratulations for a wonderful editorship, and best wishes for your retirement.

Frank B. Ramsey
Editor, Indiana Medicine

Response:

My mother never said the following to me — though if she'd been Jewish, she might well have! "Harry, by you, you're an editor — and by me, you're an editor. But Harry, tell me — by editors, are you an editor?" And this lovely letter of appreciation from a friend and fellow editor of many years suggests that I might have been able to answer "Yes" to that question. I thank him for it.

Harry L. Arnold Jr., M.D.
Founding Editor,
HAWAII MEDICAL JOURNAL

INSTRUCTIONS TO AUTHORS
HAWAII MEDICAL JOURNAL

SUMMARY OF REQUIREMENTS

Type manuscript double spaced, including title page, abstract, text, acknowledgments, references, tables, and legends.

Each manuscript component should begin on a new page, in this sequence:

Title
Text
Acknowledgments
References
Tables: each table, complete with title and footnotes, on a separate page
Legends for illustrations

Illustrations must be good quality, unmounted glossy prints usually 12.7 by 17.3 cm. (5 by 7 in.) but no larger than 20.3 by 25.4 cm. (8 by 10 in.).

SUBMISSION OF MANUSCRIPTS

Mail the manuscript in a heavy paper envelope, enclosing the manuscript and figures in cardboard, if necessary, to prevent bending of photographs during mail handling. Place photographs in a separate, smaller, heavy paper envelope.

Manuscripts should be accompanied by a covering letter from the author who will be responsible for correspondence regarding the manuscript. The covering letter should contain a statement that the manuscript has been seen and approved by all authors. Include copies of any permissions needed to reproduce published material or to use illustrations of identifiable subjects. Mail to Editor, Hawaii Medical Journal, c/o Hawaii Medical Association, 320 Ward Avenue, Suite 200, Honolulu, Hawaii 96814.

PREPARATION OF MANUSCRIPT

Type manuscript on white bond paper, 20.3 by 26.7 cm. or 21.6 by 27.9 cm. (8 by 10½ in. or 8½ by 11 in.) with margins of at least 2.5 cm. (1 in.). Use double spacing throughout, including title page, abstract, text, acknowledgements, references, tables, and legends for illustrations. Begin each of the following sections on separate pages: Title Page, Acknowledgments, References, Tables and legends. Number pages consecutively, beginning with the Title Page. Type the page number in the upper right-hand corner of each page.

Manuscripts will be reviewed for possible publication with the understanding that they are being submitted to one journal at a time and have not been published, simultaneously submitted, or already accepted for publication elsewhere. This does not preclude consideration of a manuscript that has been rejected by another journal or of a complete report that follows publication of preliminary findings elsewhere, usually in the form of an abstract. Copies of any possibly duplicative published material should be submitted with the manuscript that is being sent for consideration.

TITLE PAGE: The title page should contain (1) the title of the article, which should be concise but informative; (2) a short running head or footline of no more than 40 characters (count letters and spaces) placed at the top of the title page; (3) first name, middle initial, and last name of each author, with highest academic degree(s); (4) name of department(s) and institution(s) to which the work should be attributed; (5) disclaimers, if any; (6) name and address of author responsible for correspondence about the manuscript; (7) names and address of author to whom requests for reprints should be addressed, or statement that reprints will not be available from the author; (8) the source(s) of support in the form of grants, equipment, drugs, or all of these.

TEXT: The text of observational and experimental articles is usually—but not necessarily—divided into sections with the headings: Introduction, Methods, Results, and Discussion. Long articles may need subheadings within some sections to clarify their content, especially the Results and Discussion sections.

Introduction: Clearly state the purpose of the article. Summarize the rationale for the study or observation. Give only strictly pertinent references, and do not review the subject extensively.

Methods: Describe your selection of the observational or experimental subjects (patients or experimental animals, including controls) clearly. Identify the methods, apparatus (manufacturer's name and address in parenthesis), and procedures in sufficient detail to allow other workers to reproduce the results. Give references to established methods, including statistical methods; provide references and brief descriptions of methods that have been published but are not well known; describe new or substantially modified methods, give reasons for using them, and evaluate their limitations.

Include numbers of observations and the statistical significance of the findings when appropriate. Detailed statistical analyses, mathematical derivations, and the like may sometimes be suitably presented in the form of one or more appendixes.

Results: Present your results in logical sequence in the text, tables, and illustrations. Do not repeat in the text all the data in the tables and/or illustrations: emphasize or summarize only important observations.

Discussion: Emphasize the new and important aspects of the study and conclusions that follow from them. Do not repeat in detail data given in the Results section. Include in the Discussion the implications of the findings and their limitations and relate the observations to other relevant studies. Link the conclusions with the goals of the study but avoid unqualified statements and conclusions not completely supported by your data. Avoid claiming priority and alluding to work that has not been completed. State new hypotheses when warranted, but clearly label them as such. Recommendations, when appropriate, may be included.

ACKNOWLEDGMENTS: Acknowledge only persons who have made substantive contributions to the study. Authors are responsible for obtaining written permission from everyone acknowledged by name because readers may infer their endorsement of the data and conclusions.

REFERENCES: Number references consecutively in the order in which they are first mentioned in the text. Identify references in text, tables, and legends by arabic numerals. References cited only in tables or in legends to figures should be numbered in accordance with a sequence established by the first identification in the text of the particular table or illustration.

Use the form of references adopted by the U. S. National Library of Medicine and used in *Index Medicus*. The titles of journals should be abbreviated according to the style used in *Index Medicus*.

TABLES: Type each table on a separate sheet; remember to double space. Number tables consecutively and supply a brief title for each. Give each column a short or abbreviated heading. Place explanatory matter in footnotes, not in the heading. Explain in footnotes all nonstandard abbreviations that are used in each table. For footnotes, use the following symbols in this sequence: *, **, †, ‡, §, ‖, ¶, ††. . . . Identify statistical measures of variations such as SD and SFM.

ILLUSTRATIONS: Submit the required number of complete sets of figures. Figures should be professionally drawn and photographed; freehand or typewritten lettering is unacceptable. Instead of original drawings, roentgenograms, and other material, send sharp, glossy black-and-white photographic prints, usually 12.7 by 17.3 cm. (5 by 7 in.) but no larger than 20.3 by 25.4 cm. (8 by 10 in.). Letters, numbers, and symbols should be clear and even throughout, and of sufficient size that when reduced for publication each item will still be legible. Titles and detailed explanations belong in the legends for illustrations, not on the illustrations themselves.

Each figure should have a label pasted on its back indicating the number of the figure, the name of the authors, and the top of the figure. Do not write on the back of the figures or mount them on cardboard, or scratch or mar them using paper clips. Do not bend figures.

LEGENDS FOR ILLUSTRATIONS: Type legends for illustrations double spaced, starting on a separate page with arabic numerals corresponding to the illustrations. When symbols, arrows, numbers, or letters are used to identify parts of the illustrations, identify and explain each one clearly in the legend. Explain internal scale and identify method of staining in the photomicrographs.



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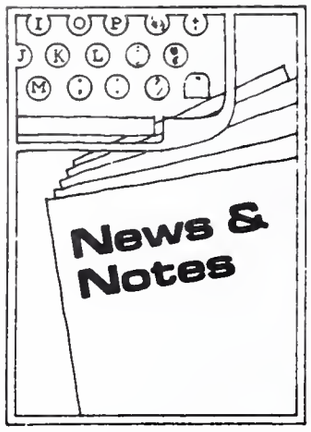
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3rd Annual Straub Cardiology Update

When Jerome Polimar, our favorite Ayerst rep, invited us to the annual Straub Cardiology Update last year, we wondered what a GP would be doing attending sophisticated cardiologist-oriented lectures, but then we found everyone there, from FPs to neurosurgeons, from dermatologists to OB-Gyn people, from general surgeons to radiologists. And we almost understood everything that was said. When he invited us again this year, we canceled all morning appointments, though we were in the throes of an influenza epidemic. Not only were our patients ill, but we ourself were down with the flu, despite the flu shot we took in October.

Armed with cough syrup, hard candy to stifle cough, and a woolen sweater, we ventured forth with a throbbing headache, aching joints, and lack of sleep from coughing all night long.

We were certain nothing could surpass last year's seminar, but this year's was even better. Perhaps we understood what PCWP, MVQ2, TPR, MAP, ICSK, etc. meant.

Our dear Editor in Chief, **Fred Reppun**, had written an excellent review of last year's seminar and had asked us to cover the lectures this year. We took notes furiously, reams and reams of verbiage, but when we tried to do a summary, we noticed that we had counted the trees and had forgotten to view the forest.

The voluminous notes would have filled 10 printed pages instead of the 2 pages allotted to us in the JOURNAL.

Dave Fergusson greeted the 500-plus registrants from 4 foreign countries and 24 other states with: "Oahu is aptly named because it means 'meeting place.' " Roger White projected slides of old photos with humorous commentary, e.g. a slide of a 300-lb. woman in a Gay Thirties swimsuit labeled "cardiomegaly."

Ezra Amsterdam from UC-Davis noted that CHD is still the leading cause of death in the United States, representing 550,000 deaths per year, or 28% of all mortality. There are 1.5 x 10^6 MIs per year and 5.4 x 10^6 symptomatic CHD patients. The incidence and mortality of CHD have been declining because of better control of coronary risk factors; the advent of CCU, CPR, drugs, CABG, exercise, and early diagnosis; and improved socio-economic factors.

The major risk factors have been altered. For example, smoking has declined 29% in the last 20 years, and treatment of hypertension including mild HBP and HBP in the elderly has made it possible to reduce CV mortality 20%/5 years. There has been a decrease in average serum cholesterol level because of major dietary changes, but the problem of CHD still exists.

Nelson Schiller, associate professor of medicine and radiology at UCSF, spoke glowingly of "frontiers in cardiac imaging" and discussed advances in echocardiography, Doppler, rapid CT, and NMRs.

Schiller lampooned the National Enquirer: "Experts warn that baboon hearts could turn babies into savages." He went on, "The last two years have seen the emergence of cardiac CT scanning, digital-subtraction angiography and nuclear-phase imaging. At present, none of these techniques will replace echocardiography; the 2-dimensional Doppler will become an office or bedside procedure although the newer modalities will be employed for more complex problems. NMR imaging will provide non-invasive tissue characterization; metabolic classification of the myocardium will be done by spectroscopy. A cartoon aptly summed up Schiller's sentiments: "Sometimes I ask myself . . . where will it all end?"

Eric Michelson of the Thomas Jefferson School of Medicine reviewed the stepped-care management of hypertension and waxed enthusiastic about the newer beta-blockers, eg. labetolol, which is preferred over propanalol because it does not reduce cardiac output, decreases total peripheral resistance, and increases coronary sinus flow. Labetolol given IV is safer than Nitropurusside in treating hypertensive crises.

Michelson spoke briefly on calcium-antagonists and combination Rx with beta-blockers.

Kanu Chatterjee of UCSF spoke about heart failure and described all the newer drugs available for treating refractory heart failure. He bravely admitted that mortality has not changed despite the improved hemodynamics resulting from using newer drugs. He described at length, and with enthusiasm, the comparative hemodynamic effects of the vasodilator drugs, the nitrates, hydralazine, prazosin, and captopril.

Collected Jokes

As heard during the Straub Cardiology Update '85:

A Norman Shumway anecdote: "Four years ago, a 45-year-old Arizona newswoman needed a heart-lung transplant in a hurry. A suitable donor was available, but at the time, we had FDA drug approval only for heart immunosuppression and not for the lung. When we told her how sorry we were that we were restricted by the FDA to transplant a heart but not a lung, she put in a direct call to Sen. Barry Goldwater Sr. Result: FDA approval came within 48 hours. She got her heart-lung transplant and is living and well today." (As heard by **Walter Quisenberry**)

Norman Shumway showed a recent photo of Dr. Christian Barnard, the South African surgeon who performed the first heart transplant with a young chick on each arm. Shumway commented wryly: "Guess he's still operating."

Richard Parker spoke on cost-effective therapy and was comparing DRGs vs cost for those under and over 70 years of age "I'm from Washington, D.C.; you notice that the figures never balance . . ., " he quipped.

We plan to summarize the remaining talks at a later date.

Professional Moves

Kung Hay Fat Choy, or Have a Prosperous New Year, is considered too bourgeois in the People's Republic of China, so they say *Gung Ho Xin Nian Kuai Lo,* or Wishing You a Happy New Year.

Whatever. The Year of the Ox is upon us.

It is said that the Ox people are patient, good listeners, usually quiet but capable of being eloquent. They hate to fail, they are stubborn and have alert minds and bodies.

In March, *Homo sapiens medicus* was relatively inactive . . . Pediatrician **Ken Saruwatari** joined the Straub Clinic's Aiea office at 98-1247 Kaahumanu St., Suite 215; pediatrician and hematology-oncologist **Shigeko O. Lau** relocated to Straub Clinic & Hospital Inc. at 888 South King St.; ophthalmologist **Gary Edwards** opened the 20/20 Surgicenter at the Beretania Medical-Dental Plaza, 848 S. Beretania St.; and OB-Gyn man **Haitham Dalgamouni** opened his office at 6650 Hawaii Kai Dr.

Hilo cardiologist **Jiro Nakano** is a busy practitioner, an associate clinical professor of medicine, and in his spare time, a historian, poet-author, and member of several *haiku* and *tanka* clubs. His most recent work, "Samurai Missionary," published last November, is the biography of the late Rev. Shiro Sokabe, who was revered as the Saint of

Honomu. Jiro spent eight years researching the reverend and his work.

Honolulu pediatrician **Calvin Sia** believes that child abuse can be prevented if newborn infants and their high-risk parents are given early help. Sia, who is on the board of KWCMC and the Hawaii Family Stress Center, is pushing a proposal before the State Legislature for a pilot project that would use the stress center's methods to demonstrate that intervention can break the cycle of violence (i.e., abused children often grow up to be abusive parents).

Andrew Schwartz, QMC-ER physician and president of the local chapter of the American College of Emergency Physicians, estimates that two-thirds of the 20 or 30 patients treated at Queen's ER for injuries received in beach accidents are visitors. He believes Sandy Beach is particularly dangerous and contributes to a steady flow of injuries throughout the year, whereas the North Shore waves contribute only during the winter months.

Marian Melish reports that "Kawasaki Syndrome" is more prevalent in Hawaii than elsewhere in the world, except in Japan, and that currently there are 250 cases in our state.

"It was first considered an infectious disease, but now we know it is a blood vessel disease . . . and aspirin is the best therapeutic treatment." IV gamma globulin therapy is a research project started in March 1984 to prevent cardiovascular complications which occur in 30% of the patients.

The U.S. FDA approved the use of oral acylovir for genital herpes in February. **Lee Jacobs** of Kaiser remarked, "We haven't seen this kind of breakthrough before. This one really works."

Gyn man **Rick Williams** noted, "The number of people with herpes is at an all-time high." Ralph Hale, chairman of OB-Gyn at the UH medical school, estimates that 5 to 10% of the state's population has herpes of one kind or another. The university will continue a 2-year, double-blind study to see if local results match the national success rate.

The FDA approved ELISA (Enzyme-linked Immunosorbent Assay) in March for AIDS. **David McEwan,** president of Life Foundation, warns that the test only measures whether a person has the antibodies of HTLV-3 virus, not whether he actually has AIDS.

Judith Macurda, chief of state DOH epidemiology, urged Island college students studying on the Mainland to check their records for measles immunization because of the recent outbreak of measles on Mainland college campuses. She estimates that 15% of our college-age youth are unprotected against rubella.

"Monica Throws Monkey Wrench into Doctor's Day." Aiea ophthalmologist **Geoffrey Davis** "made his venture into monkey business" at the request of a vet whose patient, Monica, a rhesus monkey with diabetes, needed cataract surgery. Davis tried to implant a human intraocular lens donated by the manufacturer but discovered that monkey eyes are smaller and the plastic lens would not fit properly. So he simply removed the opaque cataract. Monica does well, even without thick glasses or contact lenses, since "Monica doesn't want to monkey around with anything that would give you a human appearance." Not even post-op eye patches.

Back in May 1984, Mary Cooke, Advertiser food editor, published Kailua physician **William Busse's** gourmet recipes for his Hungarian Chicken and Chicken Stroganoff recipes.



Two new antibiotics — Rocephin (ceftriaxone sodium/Roche) and Coactin (amdinocillin/Roche) — that represent "firsts" in several areas of medicine, now are available from Roche Laboratories, a division of Hoffmann-La Roche, Inc.

* * *

The new Skin Skribe Twin-tip Surgeon's Pen from HMS is the first marking pen designed for the surgeon's specialized needs. Two tips afford the surgeon greater freedom and ease of use, and ensure complete patient safety. The ultra micro tip is needle-sharp, but soft and not damaging to tissue, for use in facial, cosmetic, and eye procedures. The broad tip is designed for the wide variety of general and orthopedic procedures requiring a heavy line of ink that will not wash off after Betadine prep. And with the Twin-Tip Surgeon's Pen you get two pens in one. For additional information, contact your local hospital suppy dealer or Hospital Marketing Services, Inc., Industrial Park, P.O. Box 1217, Naugatuck, Conn. 06770.

* * *

Trauma to the Hand: Diagnosis, Treatment, and Functional Restoration, sponsored by the American Society for Surgery of the Hand, September 16-18, 1985, Campus Inn, Towsley Center, Ann Arbor, Mich. for more information write: American Society for Surgery of the Hand, 3025 South Parker Road, Suite 65, Aurora, Colo. 80014.

* * *

The American Medical Association reports that in 1973 only about 8% of physicians were women, compared to 13% in 1983. By the year 2000, the AMA predicts that one of every five physicians will be female, compared to the current estimate of 1 in 10. In the 1983-84 school year, women accounted for one-third of enrolled medical students, while during the 1974-75 school year less than one-quarter of enrolled medical students were women.

* * *

The American Medical News of February 22, 1985, headlines an article: "Sushi Found to Harbor Parasites." In the first sentence of the article, there is a strong implication that "sushi" is the Japanese term for "raw fish." The implication is strengthened further down the column by the allegation that "the investigators found that 155 of the patients (87.1%) had eaten raw mackerel; seven, horse mackerel; three, bream; and five had eaten squid, sardines, or bonito. Eighteen patients did not know what type of fish they had eaten." (The author is probably one of those benighted malihinis who has never been to Hawaii, much less to a sushi bar!)

* * *

Medical Economics editor Don J. Berg, in the April 1, 1985, issue states: "An OBG practicing on Long Island now will pay $82,500. That's one hell of a pile of money. It's more than the typical FP, GP, or pediatrician netted in 1983, according to our Continuing Survey. Indeed, the national median net for OBGs in 1983 was only $109,170." Is this an April Fool joke?

* * *

Calcimar (calcitonin-salmon) Injection, Synthetic, in conjunction with adequate calcium and vitamin D, is indicated for the treatment of postmenopausal osteoporosis. A two-year controlled study utilizing daily injections of Calcimar, supplemented by daily oral intake of calcium carbonate and vitamin D, demonstrated a significant increase in total body calcium in women with postmenopausal osteoporosis. Evidence of efficacy was based on total body calcium, and not on improved bone density measurements or fracture rates. USV Laboratories, 303 South Broadway, Tarrytown, N.Y. 10591.

Fulminating Pulmonary Cryptococcosis Responsive to Sulfadiazine

D.G. Massey, M.D., FRCPE, G. Ching, M.D. and D. Na'ai

• *Since first reported in 1924, primary pulmonary cryptococcosis has been a difficult disease to diagnose and manage.*[1] *Fortunately, many cases do not require therapy, but for those that do, a wide range of chemotherapeutic agents have been used, usually with little success.*[2] *The introduction of amphotericin B in 1960 and its subsequent combination with 5-FC have improved the prognosis. However, the toxicity of the former has led to editorial comment that the therapy can be worse than the disease. Occasional success has been noted with other drugs such as miconazole. Berk and Gerstl successfully administered sulfadiazine and penicillin for cryptococcal pneumonia but the response was far from dramatic.*[3] *We report the prompt response of fulminating cryptococcal pneumonia to oral sufadiazine.*

Case Report

A 56-year-old handyman of Japanese descent was well until July 1952, when he was hospitalized for one month with pneumonia and pleurisy of the left lung. These responded rapidly to oral penicillin. No etiology was demonstrated.

He remained well until June 1953, at which time he developed progressive fatigue, malaise, dyspnea, cough productive of tenacious, glistening sputum, and right pleuritic pain. One week later he was admitted to the hospital. His temperature was 37.4°C; pulse, 82/min., respiration, 20/min.; and blood pressure, 120/70. He produced up to 500 ml of thick gray gelatinous sputum per day.

There were bronchial breath sounds with crackles over the right lung. Radiographs were compatible with pneumonia of the right upper lobe and pleurisy. White cell count was 9,700 with normal differential; urine was normal. Sputum smears revealed single and budded yeast-like cells with wide capsules; culture grew encapsulated "yeast" cells.

He received penicillin IM and oral chlortetracycline hydrochloride and chloramphenicol in therapeutic doses but his condition steadily deteriorated.

One month after admission, he was transferred to Leahi Hospital because one brother had died of tuberculosis in 1932 and another brother was being treated there for tuberculosis.

On admission, he was acutely ill with severe dyspnea. He was an immigrant who had been employed for 20 years on a sugar plantation and had worked the 6 years prior to admission as a handyman for a local construction firm. He denied frequent or close exposure to avian species; he was not a gardener.

On examination, he was toxic with a spiking fever to 40°C, a clouded sensorium, and central cyanosis. Chest examination revealed dullness, decreased breath sounds, and moist crackles over the entire right chest. Skin was clear. Urine and cerebrospinal fluid were normal. White cell count was 23,000, with 85% polymorphonuclear cells. Radiographs showed moderately dense nodular infiltration in the right upper zone, right hilar mass, and right pleural effusion. *Cryptococcus neoformans* was cultured repeatedly from sputum and pleural fluid but not from blood. Inoculation of guinea pigs resulted in their death from massive cryptococcal pneumonia in 3 weeks. Cultures of sputum and pleural fluid were negative for ordinary pathogens and *M. tuberculosis.*

The patient was started on oral sulfadiazine (7.0 gm daily), sodium bicarbonate (9.75 gm daily), and potassium iodide (30 drops t.i.d.). He was placed in an oxygen tent.

There was a rapid and strikingly favorable response to therapy. In four days, the toxemia was gone, patient was afebrile, and cough, sputum, dyspnea, and cyanosis had markedly decreased. Radiographs showed clearing of the right upper zone. He was removed from the oxygen tent.

He continued to improve although sputum and thoracentesis cultures were occasionally positive for *C. neoformans.*

The patient was discharged on 7.0 gms sulfadiazine daily after six months of hospitalization, in excellent clinical condition, having only a slight cough productive of less than 30 ml of sputum daily. He soon returned to work. Sputum was positive on five occasions for *C. neoformans* but the radiographs showed no change. Sulfadiazine was discontinued in May 1961.

Two months later, the patient, now 66 years of age, was readmitted for a left upper lobe nodule. Sputum cultures were negative for *C. neoformans.* Sulfadiazine

From the Research Department, Kuakini Medical Center; Leahi Hospital; and the Department of Medicine, John A. Burns School of Medicine, University of Hawaii.

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Accepted for publication March 1985.

and sodium bicarbonate were restarted in the previous dosage. Resection of the nodular lesion revealed chronic granulomatous inflammation, possibly due to botryomycosis. The patient was discharged on sulfadiazine (7.0 gm daily). He remained well with negative sputum cultures. He discontinued medication in 1973 against physician's orders.

In January 1981, he was hospitalized elsewhere for a bacterial pneumonia and was transferred to Leahi Hospital for intermediate nursing care. On admission he appeared well; his blood pressure was 140/80. No wheezes or crackles were heard. CBC, urinalysis, and blood chemistry all fell within normal limits. Radiographs were unchanged, showing right apical densities, pleural thickening, and the residue of the left thoracotomy.

While in the intermediate care facility, sputum cultures for *C. neoformans* were negative on four different occasions. He had several episodes of urinary tract infection, which responded well to antibiotics.

In October 1983, the patient expired at age 88 years. There had been no clinical symptoms or signs suggestive of carcinoma. Autopsy revealed patchy bilateral acute bronchopneumonia. The right lung showed scattered 0.5 cm cavities containing fungal forms consistent with cryptococcal species but cultures yielded no growth.

A 3 cm well-differentiated adenocarcinoma of the cecum was found with invasion of the muscularis but not the serosa. A nodule in the left lung was metastatic adenocarcinoma similar in appearance to the cecal tumor. Other findings were focal adenocarcinoma of the prostate and microadenoma of the pituitary.

Discussion

A previously healthy Japanese male with life-threatening primary pulmonary cryptococcosis responded dramatically to oral sulfadiazine, sodium bicarbonate, and potassium iodide. There was no clinical recurrence of the infection although at autopsy, 31 years after the initial episode, cryptococci were present in the lung and there was cancer with metastasis.

Although one must be exceedingly cautious in drawing conclusions from one case, this regimen may offer a benign alternative or supplement to the use of amphotericin B with its frequent severe toxicity.

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3. Berk M, Gerstl B: Torulosis (Cryptococcosis) producing a solitary pulmonary lesion. *JAMA* 149:1310, 1952.

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Doctors Honor Students at Science Fair

Hawaii Medical Association and Honolulu County Medical Society sponsored awards at the 28th annual Hawaiian Science and Engineering Fair at the Neal Blaisdell Center April 9 to 13, 1985. Physicians took on the difficult task of selecting winners from among the top medical and health research projects prepared by intermediate and high school students in the state. Projects entered at this fair had qualified for state-level competition during school and district fairs held in February.

HMA judges were Judith Ramseyer, M.D. and Ronald Lee, M.D.; HCMS judges were Virgil Jobe, M.D. and John Spangler, M.D.

HMA President William H. Hindle, M.D. and HCMS President Allan R. Kunimoto, M.D. presented the awards for the respective organizations at the HSEF Awards Convocation Ceremony April 11. Award winners are as follows:

HMA Recipients

Senior Division

First place	Carole K. Chu Helen Tuan
Second place	Flora Aquino Flordeliza Aquino
Third place	Naomi U. Gaza Elizabeth U. Yabes
Honorable Mention	Linh Van Dai

Intermediate Division

First place	Dane Luna
Second place	Tammy Ogimi Charlyn S. Honda
Third place	Jonathan M. Emura
Honorable Mention	Julie Ann Chang

HCMS Recipients

Senior Division

First place	Elsie S. Raguindin
Second place	Jennifer L. Parker
Third place	Danette P. Raniada Jayna K. Williams
Honorable Mention	Lori-Ann L.K. Lin

Intermediate Division

First place	Stacia Badua Kris Nakata
Second place	Debra Murakami Anna Pajarillo
Third place	Jeremy K. Welsh
Honorable Mention	Dane Luna

"Doctor, you may reproduce these pages as handouts for your patients."

BREAST CANCER

Treatment Alternatives

A Woman's Choice

You are the person to make the choices

You have been told that you have breast cancer. The diagnosis of this disease was made by a specialist called a pathologist through examination of tissue removed from your breast. What do you do next?

You will wish professional advice to aid in making your choice for treatment. The treatment of breast cancer is highly individualized and varies with each patient, the type of tumor, and its extent of involvement at the time of discovery. This outline is designed to give basic information about the different forms of treatment. Because there are alternative approaches, and choices to be made among these, you must be well informed and involved in the decision making. It is your body and you have the most to gain or lose by how it is treated. It is important for you to take time to discuss your situation with your physician and other health professionals before making decisions and giving your consent for treatment.

You are not alone

One in eleven women in the United States develops breast cancer. More than 100,000 women each year are faced with decisions similar to yours. Most likely, you will live many years after you have been found to have breast cancer. So think carefully about your choices.

Know the stage of your disease

The possibility of spread of cancer and the extent of such spread are important for you to know. This information may help you choose the best therapy. A system of staging is used by doctors to classify the extent of cancer growth and spread. In general, the higher the stage, the more advanced the disease and the worse the prognosis. To determine the stage, several tests and procedures are done.

Surgical treatment

If at all possible, the tumor present in the breast should be removed. Investigation of the axillary (underarm) lymph nodes involves surgery which removes the nodes present under the arm on the side of the affected breast. This is usually done some time after the original biopsy surgery. One of the most important benefits from the information about lymph node involvement is that it may help determine who may or may not benefit from a regimen of radiation therapy or chemotherapy given shortly after surgery (adjuvant therapy).

Surgical approaches include:

1. Removal of the tumor only: excisional biopsy or lumpectomy
2. Removal of a wide section of breast tissue: segmental resection or partial mastectomy
 (Both (1) and (2) may include removal of axillary nodes.)
3. Removal of entire breast: mastectomy
 a. with or without removal of axillary (underarm) lymph nodes: simple or total mastectomy
 b. with removal of axillary lymph nodes and some deeper tissues: modified radical mastectomy
4. Removal of entire breast, axillary lymph nodes and underlying chest muscles: radical mastectomy

Any type of mastectomy, by definition, results in the loss of the breast, but deformities of the chest wall or arm are not usual. Reconstruction of the breast at a later date may be desired. With lesser surgeries, there is an increase in risk of local recurrence in the remaining breast tissue. Such recurrences can be treated by further surgery or radiation without difficulty in most cases. Persistent pain and swelling of the arm are side effects seen occasionally after breast surgery, axillary (armpit) node dissection, and radiation.

Radiation treatment

Radiation treatment of local tissues of the body, known as radiotherapy, can destroy cancer cells while producing less injury to surrounding tissues.

Radiation treatment (therapy) can be used as a primary treatment in early breast cancer. After pathologic diagnosis by biopsy and surgical removal of the local tumor, external radiation therapy is used to treat the remainder of the breast, the lymph nodes, and the chest wall. This is then followed by a radiation "boost" to the biopsy site with radioactive sources temporarily introduced into the area of excision. Sometimes the boost may be given with more external irradiation (or electron beam).

Radiation therapy can also be used as a supplement to surgery. Following surgery, examination of the surgical specimen by the pathologist may show the cancer has spread outside the breast and into the underarm lymph nodes or surrounding areas. Radiation therapy will usually control cancer cells remaining in these areas.

Treatment comparisons

When disease is localized to the breast, current information shows equal survival from any of the various therapies (treatments) that remove all of the detectable tumor. When the disease is spread throughout the body, no form of local therapy has been shown to improve survival. In the case of disease that is not certain to be localized or spread, the relative effectiveness of various therapies is still not determined. However, studies are currently underway to see if there is an advantage of one therapy over another.

(Continued on page 220)

(Continued from page 219)

Chemotherapy

Drugs are sometimes given by mouth or through the vein in an attempt to destroy tumor cells or in some other way help the body fight the tumor. Chemotherapy and hormone therapy are two categories of drug treatment that may increase the effectiveness of surgery or radiation treatment by reducing the risk of disease recurrence or inhibiting growth of tumors in some groups of women. The use of chemotherapy drugs after surgery is called adjuvant chemotherapy.

Side effects are common and sometimes severe with chemotherapy drugs, and include hair loss, nausea, bone marrow depression, anemia, loss of appetite and fatigue. Hormone therapy has less frequent and troublesome side effects. You should ask your doctor to explain the possible side effects that could be expected with the drugs recommended to you.

Treatment research studies

Experimental studies are ongoing and any advice given you concerning benefits of treatment needs to be constantly updated. You may wish to consider being a part of a research study on breast cancer treatment in which treatments other than those listed are available.

Weigh your choices carefully

Make the effort to find out about your disease and the best approach for you to deal with your particular situation. Your physician or physicians can be a wealth of information and opinion. There are other sources also, including the library, the American Cancer Society, and the Cancer Information Line 524-1234 that can provide further information and help you. The ultimate decision is yours. If you are well informed, with the guidance of selected health professionals, you will make the best choice for yourself.

Give some serious thought to your diet and lifestyle

Information is accumulating rapidly that implicates the way we live and especially the kinds of foods we eat in the development of breast cancer. Meats, dairy products and vegetable oils are high in fat and low in fiber, and are believed to be involved in the cause of breast cancer. Studies are now underway to determine if improvement in survival can be gained for women with breast cancer by changing to a diet high in grains, vegetables and fruits (low-fat, high-fiber). This may be an approach you would wish to consider *in addition* to other therapies mentioned above. One thing for certain, there is nothing lost by eating better and avoiding substances harmful to health. A woman with breast cancer has every reason to be in the best health possible.

SURGICAL TREATMENT ALTERNATIVES FOR CANCER OF THE BREAST

EXCISION, LUMPECTOMY, SEGMENTAL RESECTION

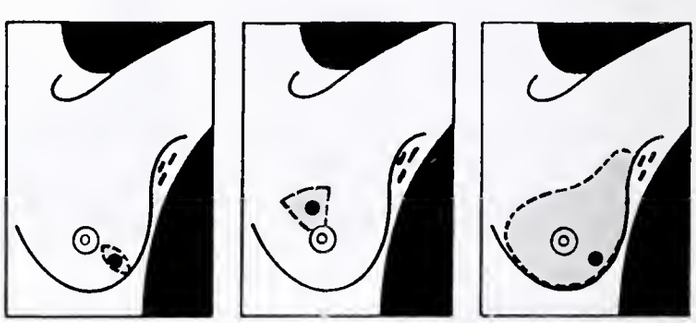
1. Breast is preserved.
2. Survival and recurrence results appear to compare favorably with mastectomy.
3. Size and shape of breast, size and location of tumor may produce less than desired cosmetic appearance.
4. Radiation may be necessary except in ongoing research studies.
 a. Radiation causes minimal temporary skin changes, and increased firmness of breast.
 b. Radiation requires daily out-patient visits for 5-6 weeks and possible short hospitalization for implant "boost" to excision site.
5. In small number of cases, mastectomy may be necessary later; other side effects of radiation such as small area of lung scarring or bone marrow effect may occur.

SIMPLE OR TOTAL MASTECTOMY; MODIFIED RADICAL MASTECTOMY

1. Removes all tumor-bearing breast tissue; removal of entire breast with some overlying skin and the nipple.
2. Retains most or all of chest muscles and retains muscle strength of arm; swelling of arm less frequent.
3. Reconstructive surgery is possible later to improve cosmetic appearance.
4. Some patients have swelling of the arm after the mastectomy.

RADICAL MASTECTOMY

1. Removal of all breast tissue, axillary (armpit) lymph nodes, and underlying chest muscles.
2. May be used for large tumors or deep tumors which extend to underlying muscles.
3. Cosmetic appearance less satisfactory and reconstructive surgery less successful.
4. Arm swelling and loss of muscle power of arm may occur.



Excision or Lumpectomy

Segmental Resection or Partial mastectomy

Simple, Total or Modified Radical Mastectomy (With underlying muscle removal—Radical Mastectomy)

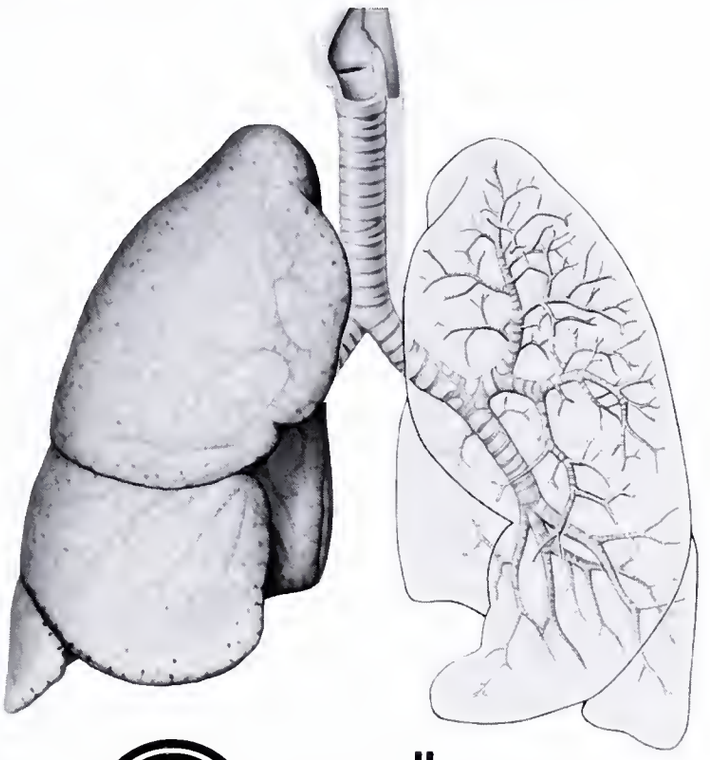
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Brief Summary Consult the package literature for prescribing information

Indications and Usage Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae,* and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication. Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings. IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor® (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions. Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note: Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

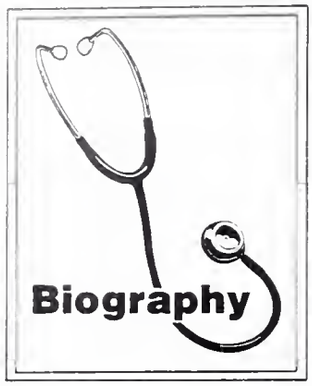
Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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J.I. Frederick Reppun, M.D.

Herman Piet Kramer, M.D. Over 80 and Still Practicing!

Herman Kramer has practiced medicine, surgery, and obstetrics for more than 50 years. He still is doing so, but only on call to assist in surgery at Castle Memorial Hospital.

"Harry" Kramer was born in Amsterdam, Holland, in 1904, the youngest of four children. His father was a merchant who lived to age 93 and his grandfather had the distinction of being born on the day Napoleon Bonaparte lost the battle of Waterloo in 1815. Dr. Kramer's grandfather was owner and captain of a clipper ship that traded with South America. He did very well, until he lost both ship and fortune in a storm — one of the business gambles of that day. Dr. Kramer has one remaining brother, who lives in Salinas, Calif.

Malaria was endemic in the "Low Countries" during his youth, and he got it at age 3. You wouldn't think it to see him now, but he was a sickly child and took longer than usual to get through school. At age 20, he matriculated at the University of Utrecht. Perhaps it was his early experience with illness that led him to the study of medicine, so he switched to the University of Amsterdam and graduated as a "Doctorandus," which best translates as "candidate in medicine." This degree in medicine gave him no right to practice clinically, but after further studies and training he acquired the title of "Arzt" — and the right to practice — in 1934, when he was 30 years old.

Dr. Kramer was interested in psychiatry and attended a clinic in that discipline, but the stodgy devotees of Freud and Jung, as he labeled them, discouraged him from continuing. So he switched to surgery — a discipline more promising of cure, successful outcome, and patient satisfaction as well as of building the physician's ego. He spent 4½ years in the Catholic Hospital in Tillburg, Holland, and was fully trained in the specialty. That was in 1939, the year Hitler's panzers and stukas made an end-run around the vaunted Maginot Line in France, and then paused.

Dr. Kramer's oldest brother had been drafted into the Dutch military. At the time, the rule was that one draftee per family was enough. In any case, he was classified as unacceptable — 4-F, in our vernacular. Instead, he was offered a position in far-off Indonesia, a Dutch colony, whereupon he married Marie "Mieke" Ketjen, whom he had been courting since Utrecht days, and the two of them went off on an adventure to the "Spice Islands." They didn't learn of Hitler's invasion of Poland, and then Holland, Belgium, and France, until they had left Europe.

Dr. Kramer became the surgeon in a hospital serving five sugar plantations in Tegal, situated in the middle of the long island of Java, halfway between Jakarta at the western end and Surabaya at the eastern end. The population of 40,000 to 50,000 in the area could not really keep a highly trained surgeon busy; he never saw a single case of appendicitis.

He seized an opportunity to transfer to the island of Biliton, located between Sumatra and Borneo. The name itself — Biliton — had attracted his fancy and played a part in his boyhood dreams, and his wife's, too. There, he served a population of some 90,000. He was employed by the tin mining company, which had 11,000 workers, mostly Chinese.

There were five physicians as company doctors, one a Chinese, another an Indonesian. Dr. Kramer did all the surgery. Tuberculosis and silicosis were rampant, so he performed a lot of "thoracolyses" to collapse and "rest" the diseased lungs. He did have a supply of sulfanilamide and, sensing an imminent invasion by the Japanese, he stocked up on drugs and dressings from the United States.

Sure enough, the Japanese attacked Pearl Harbor and Singapore. They then invaded the Malay peninsula and Indonesia practically without opposition. In March 1942, they were on Biliton. Everyone, including Dr. Kramer, who had no native or Oriental blood or connections was jailed. The women and children were shipped to encampments in Java.

For the next 4½ years, neither Dr. Kramer nor his wife knew whether the other was alive. His group was shipped by barge to Banka, an adjacent island, imprisoned in barracks, and starved on meager rations consisting mainly of uncooked chicken corn. Of a thousand so interned, 500 died of beri-beri, dysentery, malaria, other infections, parasites, and simple starvation; nearly all were in their 20s and 30s at the time. It was much the same among the women and children in separate camps, and with Mieke Kramer in Java.

In feistily facing up to her captors, Mieke was beaten by the camp commandant (who was executed after the war ended for his war crimes).

Dr. Kramer survived when others beside him collapsed and died. Maybe his childhood illnesses had toughened his fiber, but he gives the credit to his having been taken back to Biliton for a year to run the hospital, where he received better food than he had on Banka. He was sent to the hospital because a Japanese soldier on Biliton had come down with appendicitis.

Dr. Kramer was rushed by motorboat from horrible Banka to the patient's bedside, where he saw the one and only case of appendicitis he ever experienced in all his years in Indonesia!

By the time he arrived, the man's appendix must have burst into the lumen of the intestine, because there was a palpable large mass in the abdomen and he was recovering spontaneously. He got well and disappeared from Dr. Kramer's ken forever.

Like his wife, Dr. Kramer was not one to take any guff from his captors. He refused to accede to some of their unreasonable demands, sticking to his mission as a physician: To care for the sick, the injured, and the disabled of any race or nationality, friend or foe. Obviously, he was respected for his belief and therefore never physically abused.

However, the year-long respite on Biliton was all too brief. He was finally taken back to the miserable prison on Banka, where he too came down with beri-beri. Months later, he was transferred to an even worse internment camp on Sumatra and was made the camp doctor — an empty title, since there were no drugs, no dressings and no medical equipment whatever for him to work with.

The prisoners sensed that the war was nearing an end. Early in 1945, they saw 4-engine planes fly high overhead that they knew were not Japanese. The occasional CARE packages — missing most of their contents by the time they were delivered via the International Red Cross — had been rewrapped in Japanese newspapers, which the prisoners were able to decipher. This was how they learned atomic bombs had been dropped on Japan Aug. 5 and 9, 1941. Japanese efforts to proffer friendship to the prisoners were another auspicious sign.

Although he was allowed to go to a city and work in a proper hospital, Dr. Kramer contracted an infestation of hookworm, for which he was overtreated with atabrine to the point of making him quite yellow and "goofy." Malaria again also struck him down.

Mieke Kramer discovered that he was in Palumbang, Sumatra, and was flown there to be reunited with him. Despite his yellow ochre color, she exclaimed joyfully that he "looked beautiful!" Six months after the war ended, they returned to Holland on a British troop ship.

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Net Investment Income	$6,509,000	$6,094,000	$5,342,000	+21.85
Policyholders' Surplus	$27,820,000	$26,009,000	$20,604,000	+35.02
Surplus Per Insured	$7,764	$8,148	$6,736	+15.26

For further information contact the Hawaii Medical Association at 536-7702 or MIEC toll free at 800-227-4527.

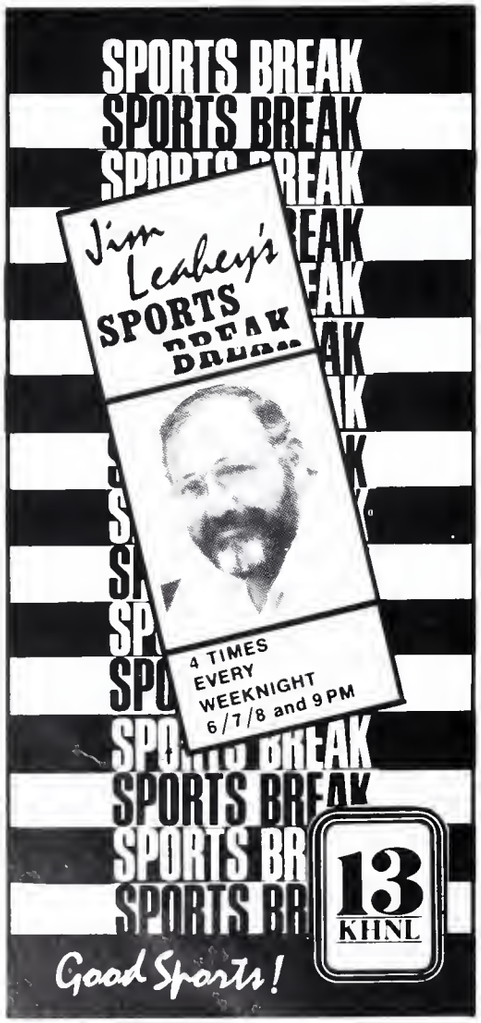
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Despite their 4½ years of travail during World War II, the Kramers returned to Biliton for another 3-year sojourn. They had to leave once again because of the Indonesian revolt against the Dutch. Once more in Utrecht, Dr. Kramer took up the study of the Dick Reid method of relaxation in childbirth. He delivered 50 babies with only one failure of the method, and taught a number of students. He finally gave it up when he found himself outside of the mainstream of the practice of medicine of that day.

Because most hospitals in Holland were closed-staff, Dr. Kramer found himself excluded. Therefore, he jumped at a chance to become a doctor in New Zealand, only to learn on his arrival that a veterinarian was wanted and expected! As a result of difficulties in acquiring licensure in New Zealand, he accepted a 3-year contract in Western Samoa, and thence by invitation moved to American Samoa. While filing for citizenship in the United States, the Kramers considered an offer from Guam, but decided to visit the States on a vacation. Stopping off in Hawaii, Dr. Kramer was persuaded by Dr. Ira Hirschy to consider employment at Kalaupapa after the vacation. The result was a 3½-year stint at that leprosarium from 1958 to 1961.

The Kramers then came to Windward Oahu. He opened an office first in Waimanalo, then in Kailua and practiced family medicine until 1973, when his wife died. They never had any children of their own. During the 12 years since then, he served some time as the resident physician at Pohai Nani Retirement Home in Kaneohe, and as Director of Castle Hospital's SNF. He now limits his medical practice to assisting at surgery.

He is a former member of AMA/HMA/HCMS. In January 1966, he became a member of AAFP and still is. As one who survived the worst aspects of a war, Dr. Kramer is unequivocally dedicated to peace efforts worldwide. It was inevitable, therefore, that he join Physicians for Social Responsibility, an organization of physicians dedicated to the prevention of nuclear war. He became a member in June 1983.

When asked what he would do differently if he could live his life over again, Dr. Kramer promptly replied that he would return to his original love: "I would become a psychiatrist!"

Dr. Kramer decries the forces that prevent present-day physicians from spending more time with their patients. He says, "Nowadays, the doctor must work hard and see as many patients as he can rush through to build up a volume practice so that he can pay off on his expensive education, the interest-laden mortgages on home and office, the many insurance policies he must carry, his large overhead costs, and particularly the astronomically high premiums for medical malpractice insurance that has now become mandatory. That is why more and more doctors are joining groups and plans."

He has gone "bare" for years. He probably will have to give up assisting in surgery, not because he lacks the skill or because of his age, and certainly not because of any infirmities, but simply because his hospital will deprive him of all hospital privileges unless he takes out a medical malpractice policy, which will cost him more than his annual income.

He believes that liability insurance, as it is designed now, is "immoral" because it is not the patient who insures his own body against catastrophe — as he would insure his house or car — but another person, the doctor, who must insure himself for that patient's benefit. A physician who courts the chance of doing harm should accept the consequences. He should be prevented from doing so in the first place; and he should be punished by law for harm done to the patient, unless it was completely inadvertent.

"The doctor who practiced good medicine in the past, and observed the dictum *Primum non nocere* never needed this kind of protection. There is no reason to believe that modern physicians malpractice; only that the risks are much greater."

The HMA commends Herman Piet Kramer for his 50 years of dedicated service to humanity as a medical doctor. Our sincere Aloha to you, Harry!

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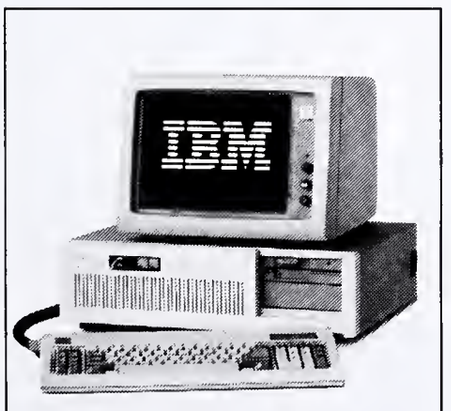
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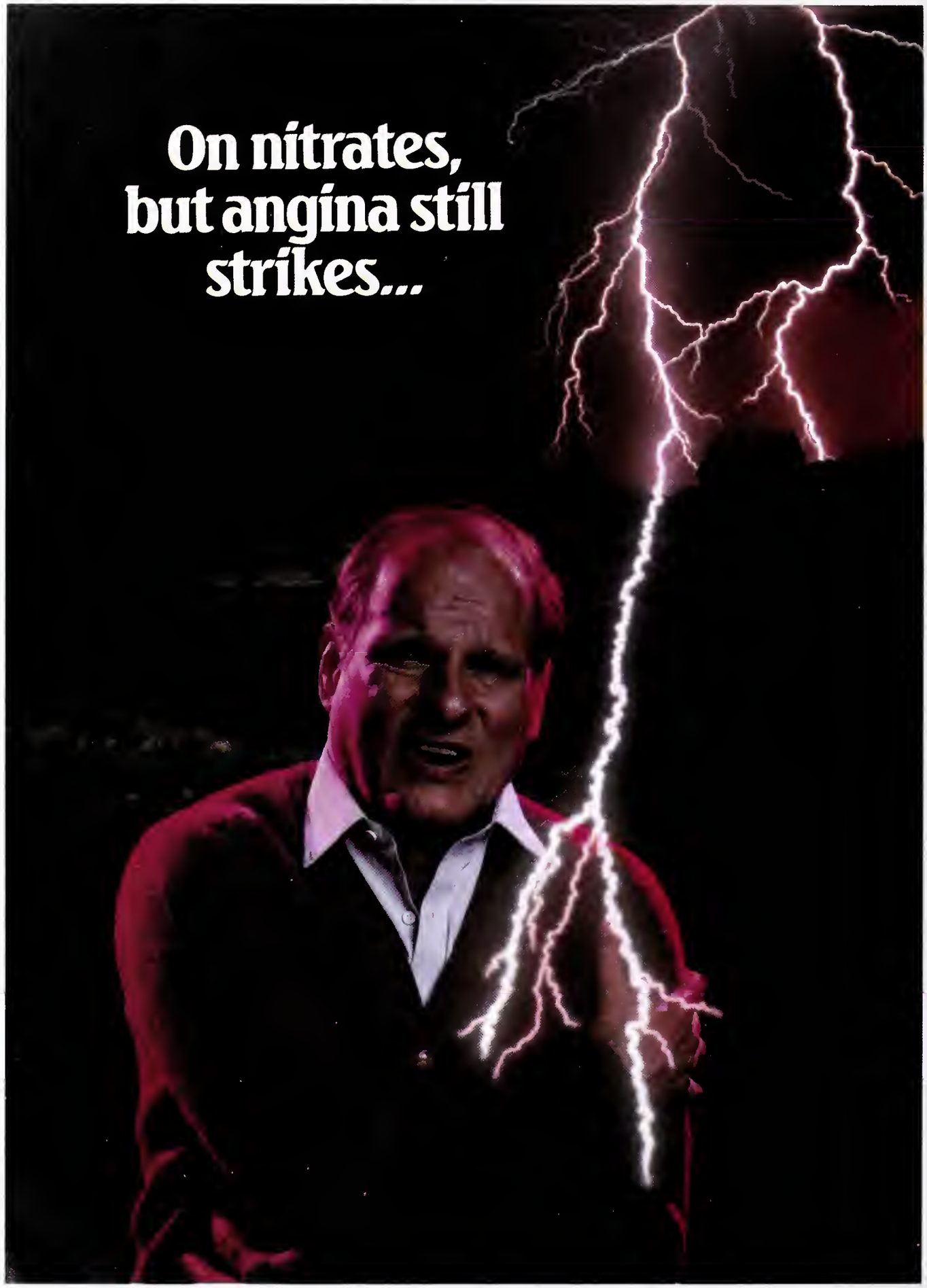
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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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14-041

Hawaii Academy of Family Physicians' Newsletter

Don and Marlies Farrell

Membership News

We welcome several new members to the chapter: **James Donovan, Kenneth Ing,** and **Paul Y.K. Lin** are new Active members; transferred Active members are **Randall Doner** from Missouri, **Deborah Love** from Michigan, and **James O. Scamahorn** from Indiana. New Affiliate members are **Joseph Fishel, April Sasaki,** and **Cedric Yoshimoto.** Our newest Student members are **Linda Baryliuk** and **Vanessa H. Fidele,** both in their second year at the U.H. School of Medicine. We wish all of them well and hope they will benefit from their association with the Academy.

The following members were re-elected to three years' Active membership after having completed at least 150 hours of CME acceptable to AAFP: **Norberto Baysa, Carlo Brizzolara, Catalino Cachero, Reginald Carvalho, Alan Chun, Bernard Chun, Eileen Exton, Joe Harrison, Margaret Johnston-Kitazawa, Lloyd Kobayashi, Fred Lam, Howman Lam, James Langworthy, Richard Lee-Ching, David Livingstone, Harold Machigashira, Harold Merselis, Sandra Penn, Fred Reppun, Richard Tesoro, Jinichi Tokeshi, James Tsuji, Kathleen Welch,** and **Larry Wong** . . . Congratulations to all!

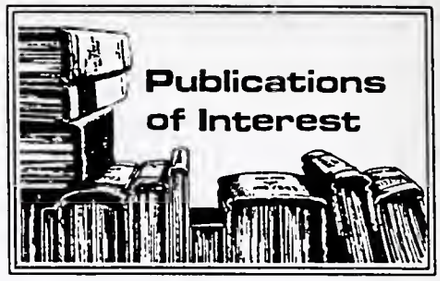
Annual Meeting

The Academy held another successful annual meeting and seminar in February 1985 that was covered extensively in the April 1-14 issue of (the national) Family Practice News. Along with many Hawaii speakers covering the spectrum of surgical subspecialties, a featured speaker was **Dr. Robert E. Rakel,** professor and head of the department of family practice at the University of Iowa College of Medicine, Iowa City. Dr. Rakel spoke of the need for family physicians to emphasize quality of total care in this age of competition.

At the annual banquet, **Dr. Robert W. Higgins,** national AAFP president, installed the chapter's new officers, councilmembers, and delegates to AAFP. They are: **Bernard Chun,** president; **Lincoln Luke,** president-elect; **Kenneth Steinweg,** secretary; and **Donald Farrell,** treasurer. New councilmembers are **Paul Esaki** (from Kauai), **Jennifer Frank,** and **Lloyd Kobayashi.** Delegates are **Donald Farrell** and **John Aoki; Lily Ning** and **Nathan Wong** are alternate delegates.

In his address, Dr. Higgins conveyed the concern of the Academy over the ever-rising malpractice insurance rates that are forcing many FPs to limit the scope of their practice. He also discussed the difficulties encountered by many family physicians who try to obtain hospital privileges due them by reason of their training, experience, and demonstrated competence. Dr. Higgins clarified the new membership requirements passed by the 1984 Congress of Delegates, to take effect in 1989, when only FP residency-trained doctors will be admitted to Active membership. This will not affect Active members already in the Academy prior to that date.

At the banquet, Dr. Herman Kramer was honored for having been in practice for more than 50 years, and was given an award.



ICD•9•CM (International Classification of Diseases, 9th Revision, Clinical Modification). Publication consists of three volumes available individually or as a set. Volume 1, Diseases Listed Numerically; Volume 2, Diseases Listed Alphabetically; and Volume 3, Surgical Procedures.

Cost: Volumes 1-3, softbound, $43, or individual softbound single volumes, $20.50.
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Make check payable and send to: ICD•9•CM, P.O. Box 991, Ann Arbor, Mich. 48106. Prices include shipping and handling.

CPT-1985 (Current Procedural Terminology), OP 341/5. Now published annually by the AMA, CPT is a uniform system of nomenclature and codes for describing medical, surgical, and diagnostic procedures performed by physicians and health facilities. CPT system is used by third-party payors and is recognized by the Health Care Financing Administration (HCFA) as the basis of the HCPCS coding system.

Cost: $25 per copy (less 10% discount for AMA members), plus $4 for shipping and handling.

Make check payable to American Medical Association and send to: Order Department, OP 341/5, American Medical Association, P.O. Box 10946, Chicago, Ill. 60610.

A Physician's Guide to Preferred Provider Organizations (PPOs), OP 166. Prepared by the AMA to inform physicians of the organizational, operational, and legal issues involved in the development of a preferred provider organization.

Cost: $4.50 (less 10% discount for AMA members), plus $2.50 for shipping and handling.

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CONTENTS

Editorial: 'Our' Medical School 238
J.I. Frederick Reppun, MD

Book Review 241
Francis J. Dann, MD

The Role of the Medical Home in Child Abuse Prevention and Positive Child Development 242
Calvin C.J. Sia, MD and Gail F. Breakey, RN, MPH

Over the Editor's Desk 247

The 1% Law 248
Becky Kendro, Assistant Executive Director
Hawaii Medical Association

Editorial This is My Mana'o 249
J.I. Frederick Reppun, MD

From the Kahuna Lapa'au 258

HMA Auxiliary 261
Lila Johnson

Spurious 262
Charles S. Judd Jr., MD

Continuing Medical Education 263

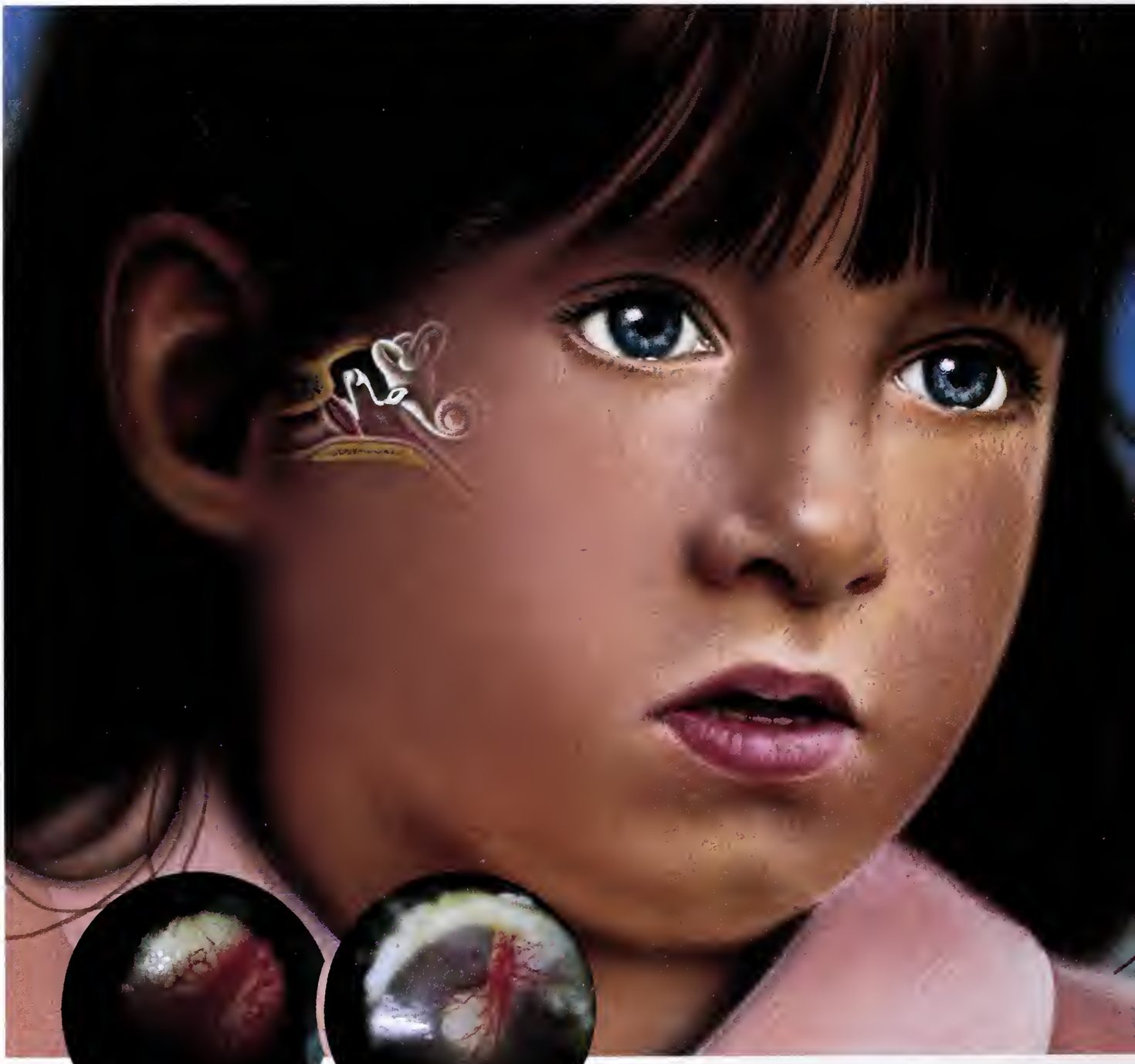
News & Notes 267
Henry Yokoyama, MD

Biography—Robert Gideon Benson 270
R. Varian Sloan, MD

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References: 1. Klimek JJ *et al: J Pediatr 96:*1087-1089, Jun 1980. **2.** Schwartz RH *et al: Rev Infect Dis 4:*514-516, Mar-Apr 1982. **3.** Cooper J, Inman JS, Dawson AF: *Practitioner 217:*804-809, Nov 1976. **4.** Antibiotic Sensitivity Report, Winter 1983. BAC-DATA Medical Information Systems, Inc. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Wormser GP, Keusch GT, Heel RC: *Drugs 24:*459-518, Dec 1982. **7.** *Med Lett Drugs Ther 23:*93-95, Oct 30, 1981

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BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS:
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Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).** *Hematologic:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
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URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
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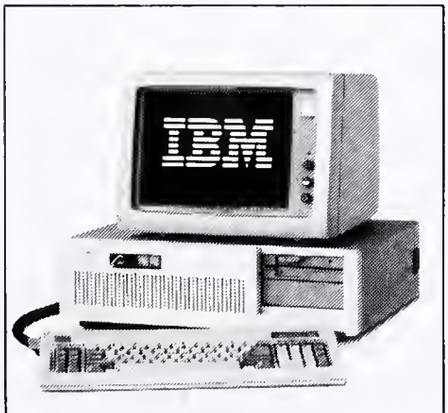
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Editorial

'Our' Medical School

The **Friends of the Medical School**, who now number 139, conducted their annual meeting on May 8, 1985, in BI03.

The gathering was a small one, but made up in quality what it lacked in quantity. Surely there are enough graduates (see below) to swell the ranks of "The Friends" by now! And, what about the 3,300 or so physicians in the State of Hawaii who are benefiting directly or indirectly from the Aesculapian temple in our midst? Their absence from participation at this event was noticeable.

Dean Terry Rogers was away campaigning for federal support — a dwindling source nowadays. In his absence on that important piece of business, his place was taken by associate dean John Wellington, who gave a "periodic program review" and status report on the school. What he told us was indeed informative enough so that each and every one of us in the medical profession in Hawaii should be apprised of what the University of Hawaii John A. Burns School of Medicine — "our" school — is doing and how it is doing. Perhaps the following will make up for what so many missed hearing directly.

First, Dr. Wellington listed the school's objectives — the why of its existence:

1. The school offers a four-year curriculum that leads to a doctorate in medicine;
2. It provides the residents of Hawaii and of the Pacific Basin access to medical education within the community;
3. It is geared to promoting primary medical care; and
4. To providing a postgraduate, in-hospital residency program; and
5. To further continuing medical education (CME) for the practicing physicians in the larger community;
6. Of the Ph.D. requirements at the University of Hawaii, the medical school provides 10%;
7. It provides education and training in the paramedical disciplines, such as for medical technologists, speech and audio therapists;
8. It offers courses in the biomedical sciences to students not going into medicine per se; and
9. This is all within a "design to improve the quality and equity of health care in the Pacific," to quote Dr. Wellington.

He went on to tell us that the students get 172 weeks of instruction over the course of four years (which leaves very little time for vacations, *qed!*, which is considerably more than what is offered at the other I30 medical schools in the United States.

"Our students are doing well," said Dr. Wellington, "with a rising level in their test scores. Our students' average grades on the National Board exams are above the national average of the I28 schools that offer these exams." The class size is now 56, down from the high of 67 of a few years back. Tuition now is at the $3,000 level and is projected to go up to $6,000 in four years.

Some 500 have graduated from the school in the I0 years since it granted its first degrees in 1975 (the school accepted its first two-year class in 1967). Most of these graduates have gone into the private practice of medicine; 46% have ended up back here in Hawaii. Currently, 300 are in residency programs.

Of the 250 who are enrolled in the school at the present time, I3 are from the Pacific basin countries. Five Pacific Islanders have graduated from the school and have finished their residencies; two of them returned to their home islands to practice and three now practice in Hawaii or elsewhere. There are I5 grads who are serving their residencies in the Trust Territory, as required by the National Health Service that funded their education at the school.

Two hundred sixteen graduates have returned to practice in Hawaii. Of these, I56 are in Honolulu; the other 60 have hung up their shingles in rural Oahu or on the Neighbor Islands. Kohala is an example of a previously underserved area that now supports several physicians.

The in-hospital residency programs take in I80 graduates at any one time; 40% of the residents-in-training here are from this medical school, the other 60% are graduates of Mainland schools. It is obvious that 60% of the graduate of the UHSM go to the Mainland for their residency training.

The program lacks training in family practice, which is *the* primary care discipline; the only FP program existing in Hawaii is at Tripler Army Medical Center under the auspices of the Armed Forces, and it is scheduled to phase out in July 1986. The school's prior experience with an FP residency at Kaiser did not work out well for three main reasons: (a) The Kaiser program could manage only two residents per year, whereas the federal requirement was for four slots to be filled each year; (b) the Kaiser program proved not to be cost-effective; and (c) federal funding ran out. Therefore, "primary care" as a goal of the school has had to be limited to internal medicine and pediatrics.

As for the financial picture elucidated for us by Dr. Wellington, the state funds the school to the extent of $8 million a year, of which $6 million goes for salaries and $2 million to several hospitals for rental of premises and use of facilities. An additional $I0 million comes from other sources, 80% to 90% of which is from the feds; this includes $4 million in grants for research projects. It costs twice as much to educate a medical student as it does to pass any other UH-Manoa student through four years of education.

The UHSM is third from the bottom of the list of the I28 medical schools that belong to the Association of American Medical Colleges in terms of funding for faculty positions (i.e. our school is getting by on a shoestring).

The saving grace is the number of "volunteer" faculty who teach at the school. Of the 1,600 or so practicing physicians in Hawaii, 700 have faculty appointments! The school has received $450,000 over the course of five years in non-state, non-federal funds from the community.

Dr. Wellington gave high praise to this community for what has given our students their major educational benefit — contact with practicing physicians and their patients — as compared with what students at other medical colleges get in the way of didactic teaching mainly. This explains, he said, why so many of ours "go into active practice rather than into research."

This naturally led him into an exposition of the amount and the quality of biomedical research that goes on at the school; he labeled it "outstanding." Much of it is in basic science, he said. He listed an extensive number of projects and he paid honor to the investigators, many of whom have received national awards for their work.

So . . . what's with the future of our little "big" school of medicine? Dr. Wellington did not care to guess what the state Legislature might do in future years in the way of supporting it, but he did emphasize again the tremendous contributions from the medical and paramedical segments of the community.

He pointed out two big pluses at the school:

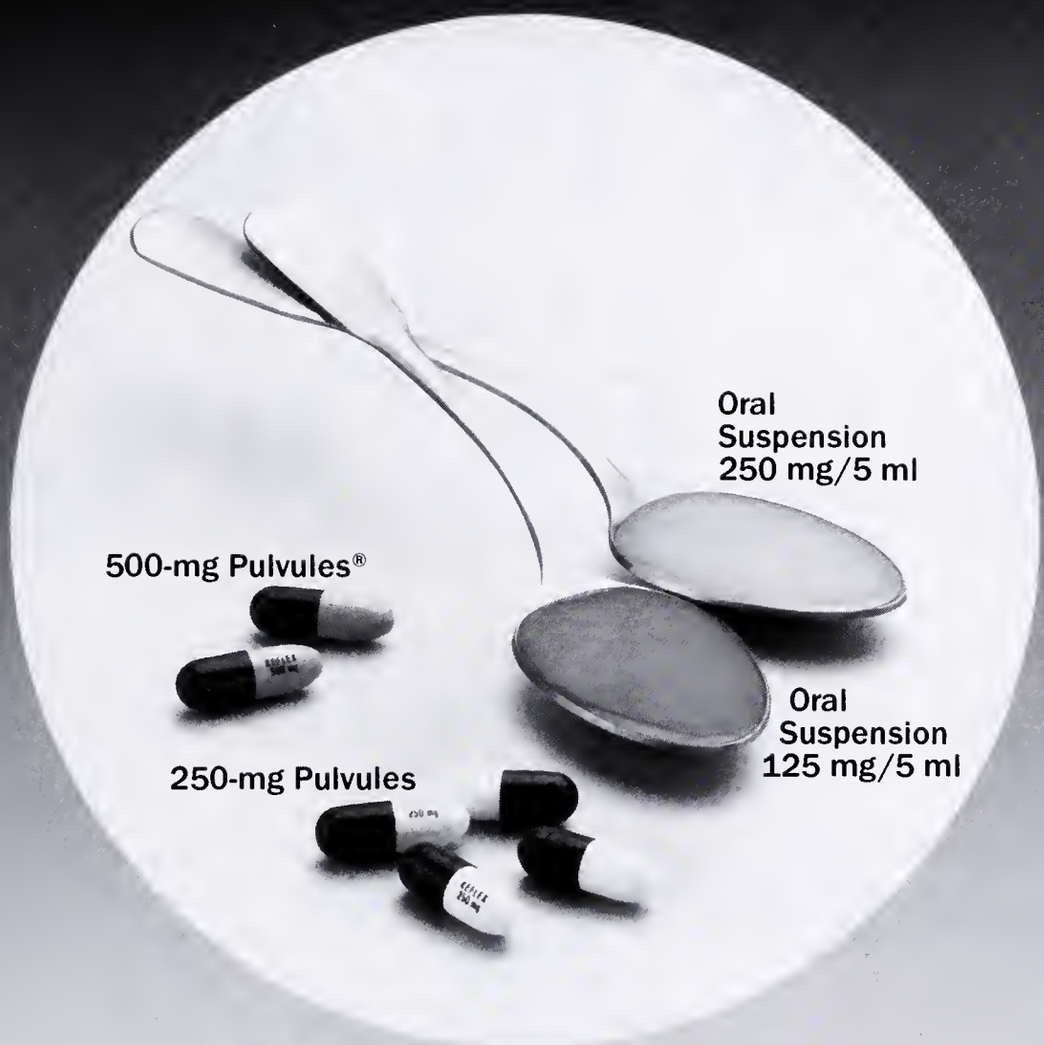
1. It provides a great opportunity for the youth of these Islands;
2. It produces doctors with whom local folk can be very comfortable and vice versa, the graduates who return here to practice will have no trouble fitting into our multicultural society and "rapping" with their patients effectively.

Incidentally, Dr. Wellington reported that there is an attrition rate of about 3% among the practicing physicians in Hawaii, which these returnees can help fill.

The moral of this story is that we in Hawaii have a medical school of which we can damn well be proud!

J.I. Frederick Reppun, MD

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AIDS: The Mystery & The Solution; Alan Cantwell Jr., MD

In the summer of 1981, a new and unusual form of severe immunodeficiency was described in Morbidity & Mortality Weekly Report. Since that initial report, more than 9,000 victims in the United States have been documented.

While the cause of this rapidly enlarging epidemic has only recently been elucidated by Gallo et al., it is Dr. Alan Cantwell's belief that "AIDS is initially a bacterial infection induced by cell wall-deficient bacteria which are present within the bloodstream of all human beings."

Physicians are not surprised at unscientific statements by non-medical people. Difficult, complex, or poorly understood phenomena are common in medicine and answers are not available as to the causes of many diseases.

In the lay press, hypotheses or oversimplified ideas are given serious consideration as etiologies for many unsolved puzzles in human biology and medicine.

When, however, persons in the medical profession publish books casting aspersion or derision on mainstream medicine, they join the ranks of these unscientific lay authors.

Those outside the mainstream must convince the majority by the use of scientific method of the validity of claims of any unproven hypotheses.

Unfortunately, Dr. Cantwell's book is a collection of unproven and unscientific ideas. It is neither cogent nor creditable and it is far from scientific. It is simply a collection of unproven hypotheses passed off as valid claims for the answers to the question of what causes AIDS.

This book will be looked upon as a non-fruitful road taken in the characterization and description of AIDS. While any physician can publish a book on a medical topic, it will never be regarded as anything more than spurious unless it is written with cogent style, and based on scientific principles. Unfortunately this book has neither quality.

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The Role of the Medical Home in Child Abuse Prevention and Positive Child Development

Calvin C.J. Sia, MD* and Gail F. Breakey, RN, MPH**

The Hawaii Medical Association and the Hawaii Chapter of the American Academy of Pediatrics adopted a Child Health Plan in 1978, which recognized that child health problems are unique and important for several reasons. These are primarily related to the vulnerability of the infant and the rapid growth in the areas of physical, emotional, cognitive, social and language development during this period. Early identification of and intervention with dysfunctions in these areas can prevent later conditions of general poor health, learning disabilities, mental retardation, juvenile delinquency, school dropout and suicides, and behavioral dysfunctions of later life. Because of extremely rapid growth in the first two years of life, the infant has special needs which, if not met, can result in less than optimal development and sometimes in the child's becoming a burden to his or her family and society.

The Child Health Plan stresses prevention in early life, through development of a better-integrated system of child health services. This system of services focuses on the well-being of the child within the context of the family. It centers on the concept that every infant born will have a "medical home" that provides primary health care services, comprehensive in nature, which address the needs of the whole child. The essentials of an adequate "medical home" include (1) geographic and financial *accessibility,* (2) *continuity* of care from the prenatal period through early childhood and adolescence, (3) *coordination* through identification of needs and linkage of the family to services needed by the child, and (4) *community orientation* of awareness of child health problems and resources within the community.

Health care is rendered, for the most part, by an unstructured system that lacks the coordination to provide information, training and direction. The busy practicing physician is often unable to "link" the family successfully to all of the services needed by the child in the critical early infancy period. Perhaps this is due to lack of orientation to community resources, but commonly it is due to a lack of adequate communication and working relationships between public and private agencies and the physician and family. Episodic, fragmented services do not contribute to the successful development of the individual infant and child.

The 1985 Hawaii State Legislature provided funds for a demonstration program that can provide a framework for linking infants at high psycho-social risk with a "medical home," and to support the physician in referring the family to other service resources as needed. This program was funded as part of the state's initiative in prevention of child abuse and neglect.

All children should have a medical home, but for children born to dysfunctional families, the need becomes critical. Child abuse and neglect have long been recognized as significant medical and social problems and recent studies indicate that the consequences of abuse and neglect and the accompanying dysfunctional parenting are of equal or greater concern.

Ray Helfer, MD, co-author of "The Battered Child," has attributed a host of problems of childhood and youth to breakdowns in the parent-child relationship. Highly dysfunctional parenting and chaotic family environments result not only in abuse and neglect but also in problems such as learning disabilities, emotional problems, acting out behaviors, mental illness, some incidence of cerebral palsy or mental retardation related to physical abuse, truancy, substance abuse, runaways, delinquency and crime. These problems hinder youth of our community from becoming productive adults and are also extremely costly in social and financial terms. A vast array of services must be mobilized to correct or deal with these problems, the most costly being the juvenile and adult corrections systems.

Prevention of child abuse and neglect and other forms of dysfunctional parenting becomes most desirable, as often these cause much irreparable damage.

Numerous studies of abusive families have led to the identification of "profiles," or characteristics, of abusive parents. From this information it has been possible to construct screening instruments for use in identifying at-risk families so preventive supportive services can be supplied.

Families are available for widespread, systematic screening only at several points in their lives, including at birth of an infant, when the child enters school and again full cycle at pregnancy.

Data recently analyzed by the director of the Children's Protective Services

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Medical Unit, James Drorbaugh, MD, indicates that about 84% of serious abuse cases and all 14 deaths since 1980 in Hawaii have occurred among children under five years of age. Intervention with at-risk families at birth is essential for this reason, and also because the first few years of life are so critical for healthy child development. Intervention at this time is also probably the most acceptable to the family, as services can be incorporated into routine perinatal services.

The Hawaii Family Stress Center at Kapiolani Women's and Children's Medical Center and Family Support Service projects at hospitals in Hilo, Kona, Maui, Molokai and Kauai have been conducting screening for at-risk families using a checklist developed by E. Henry Kempe, MD. Home visitor services are provided for at-risk families utilizing the lay therapy approach, following Dr. Kempe's model program.

The new demonstration program will be conducted at Kapiolani through the Stress Center.

This project has several goals. The first is to demonstrate effectiveness of early intervention in significantly reducing abuse of infants in one carefully defined geographic area. The second is to "link" the infant and family to a medical home for monitoring of the infant's safety, early and periodic screening in accordance with the HMA and new Medicaid guidelines, referral of the family to needed services, and providing continuity of care during the child's early years of life (i.e. birth to kindergarten).

Following screening, at-risk families will be referred to the project home outreach workers, who will facilitate parent-infant attachment, provide emotional support and assist parents to establish social support systems. Intensive involvement of the worker will continue for the first 12 to 24 months, according to the child's needs, and then taper off to a monitoring function with visits approximately 4 to 6 times a year.

Also, the worker will "link" the family to a "medical home" for the infant. Project professional and paraprofessional staff will maintain contact with the physician to review the child's status and to assist in facilitating needed referrals.

In this way, the physician becomes the case manager for ongoing follow-up; and the project staff provides support as needed, collects data and conducts periodic monitoring until the child enters school.

It is essential that the "medical home" physician develop and maintain awareness of early childhood problems as well as intervention and management skills related to these problems on an ongoing basis.

Project staff also will meet with providers of various services needed by the project families. The purpose of these meetings will be to enhance networking and to define gaps in service. Desired outcomes will be to increase awareness among service providers of the needs of at-risk families and formal documentation of these needs with recommendations on gaps inservices available.

This project will provide an organized system of identifying at-risk families, linking them to the medical home and supporting the physician in carrying out the role of medical management. The project will provide intensive emotional support to the family initially after birth, and then move toward a monitoring function through periodic home visits and contact with the physician.

The overall goal of the project is to demonstrate the effectiveness of the prevention of abuse and the establishment of support networks to promote positive child development for at-risk infants.

If successful, it is hoped that the program will be expanded, as was the pilot School Health Program.

This is a unique opportunity to develop an excellent system of preventive health services for children. Success of the Medical Home concept highlighting early periodic screening and continuity of care for the infant will be key.

Hawaii's Child Abuse Law
Hawaii Revised Statutes Chapter 350

§350-1 Definitions. For the purposes of this chapter, unless the context specifically indicates otherwise:

(1) "Child abuse and neglect" means physical injury, psychological abuse and neglect, sexual abuse, negligent treatment, or maltreatment of a child under eighteen years of age by a parent, legal guardian, or person responsible for that child's care under circumstances which indicate that the minor's health or welfare has been or is harmed or threatened with harm.

(2) "Department" means the department of social services and housing.

(3) "Harm" or "threatened with harm" means harm or threatened harm as defined in chapter 587.

(4) "Professional" means a person engaged in a specific occupation who examines, treats, attends, or otherwise provides specialized services to children.

(5) "Report" means the oral or written disclosure, to the department of social services and housing, that a minor is or is believed to have been harmed or threatened with harm by a parent, legal guardian, or person responsible for that child's care. [L 1982, c 77, §1; am L 1983, c 171, §5]

§350-1.1 Reports. (a) The following persons who, in the performance of their professional or official duties, know or have reason to believe that a child has been abused or neglected or is threatened with abuse or neglect shall promptly report the mater orally to the department of social services and housing or to the police department:

(1) Any licensed or registered professional of the healing arts and any health-related occupation who examines, attends, treats, or provides other professional or specialized services to a minor, including but not limited to physicians, psychologists, dentists, nurses, pharmacists, and other health-related professionals;

(2) Employees or officers of any public or private school;

(3) Employees or officers of any public or private agency or institution providing social, medical, hospital, or mental health services, including financial assistance;

(4) Employees or officers of any law enforcement agency, including but not limited to the courts, police departments, correctional institutions, and parole or probation offices;

(5) Employees or officers of any licensed day care center, foster care home, group child care center, or similar institution;

(6) Medical examiners or coroners.

(b) Whenever a person designated in this section is a member of the staff of any public or private school, agency, or institution, that staff member shall immediately notify the person in charge, or a designated delegate, who shall promptly report, or cause reports to be made, in accordance with this chapter. Nothing in this section is intended to require more than one report from any school,

agency, or institution.

(c) This section does not prohibit any of the persons enumerated in subsection (a) from reporting incidents which such persons have reason to believe involve abuse or neglect which come to their attention in any private or non-professional capacity.

(d) Any other person who has reason to believe that a minor has been abused or neglected or is threatened with abuse or neglect may report the matter orally to the department.

(e) The initial oral report shall be followed as soon thereafter as possible by a report in writing; provided that where a police department is the initiating agency a written report shall not be required to be filed with the department of social services and housing unless the police department has declined to take further action and the department of social services and housing informs the police department that it intends to pursue the matter of the orally reported incident of child abuse or neglect. All written reports shall contain the name and address of the minor and the minor's parents or other persons responsible for the minor's care, if known, the minor's age, the nature and extent of the minor's injuries and any other information that the reporter believes might be helpful in establishing the cause of the injuries.

(f) The director of social services may adopt, amend, or repeal rules, subject to chapter 91, to further define or clarify the specific forms of child abuse and neglect enumerated in section 350-1 for use in implementing this chapter; provided that rules adopted under this subsection shall be limited to such further or clarifying definitions. [L 1967, c 261, §2; HRS §350-1; am L 1970, c 21, §1 and c 105, §5; am L 1975, c 147, §1; am L 1977, c 81, §2; am L 1979, c 171, §1; am L 1981, c 59, §1; ren and am L 1982, c 77, §2]

§350-2. Action on reporting. The department of social services and housing, upon receiving such report, shall immediately take necessary action toward preventing further abuses, safeguarding and enhancing the welfare of such minor, and preserving family life wherever possible. If the injury or abuse to the minor is so serious that criminal prosecution is indicated, the department shall, in addition to taking such action under this section as it deems necessary, report its findings to the police or the office of the prosecuting attorney. The department shall maintain a central registry of reported cases and may adopt such rules and regulations as may be necessary in carrying out this section. [L 1967, c 261, §3; HRS §350-2; am L 1970, c 105, §5]

§350-3 Immunity from liability. Anyone participating in good faith in the making of a report pursuant to this chapter shall have immunity from any liability, civil or criminal, that might be otherwise incurred or imposed by or as a result of the making of such report. Any such participant shall have the same immunity with respect to participation in any judicial proceeding resulting from such report. [L 1967, c 261, §4]

§350-4 Exemption. No child who in good faith is under treatment by spiritual means alone through prayer in accordance with the tenets and practices of a recognized church or religious denomination by a duly accredited practitioner thereof shall, for this reason alone, be considered to be medically neglected under this chapter. [L 1967, c 261, §5]

§350-5 Admissibility of evidence. Neither the doctor-patient privilege nor the husband-wife privilege shall be ground for excluding evidence regarding a minor's injuries, or the cause thereof, in any judicial proceeding resulting from a report pursuant to this chapter. [L 1967, c 261, §6]

[§350-6] Confidentiality of reports. All reports concerning child abuse and neglect made pursuant to this chapter, as well as all records of such reports, are

(Continued on page 247)



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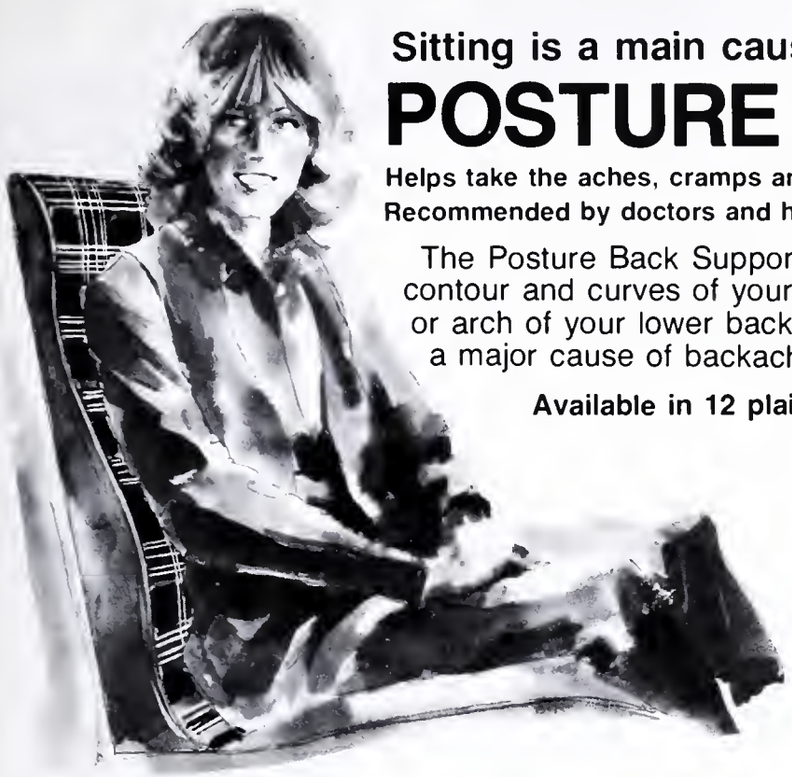
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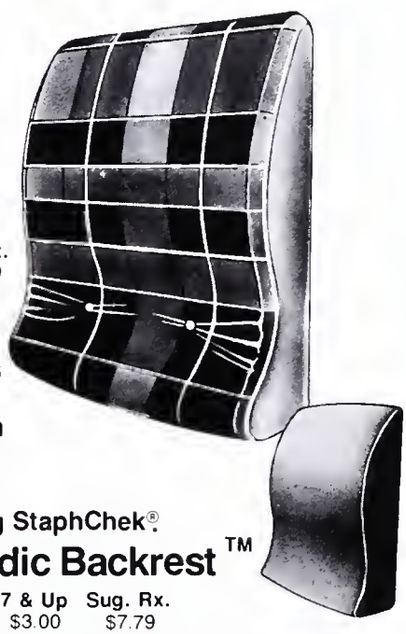
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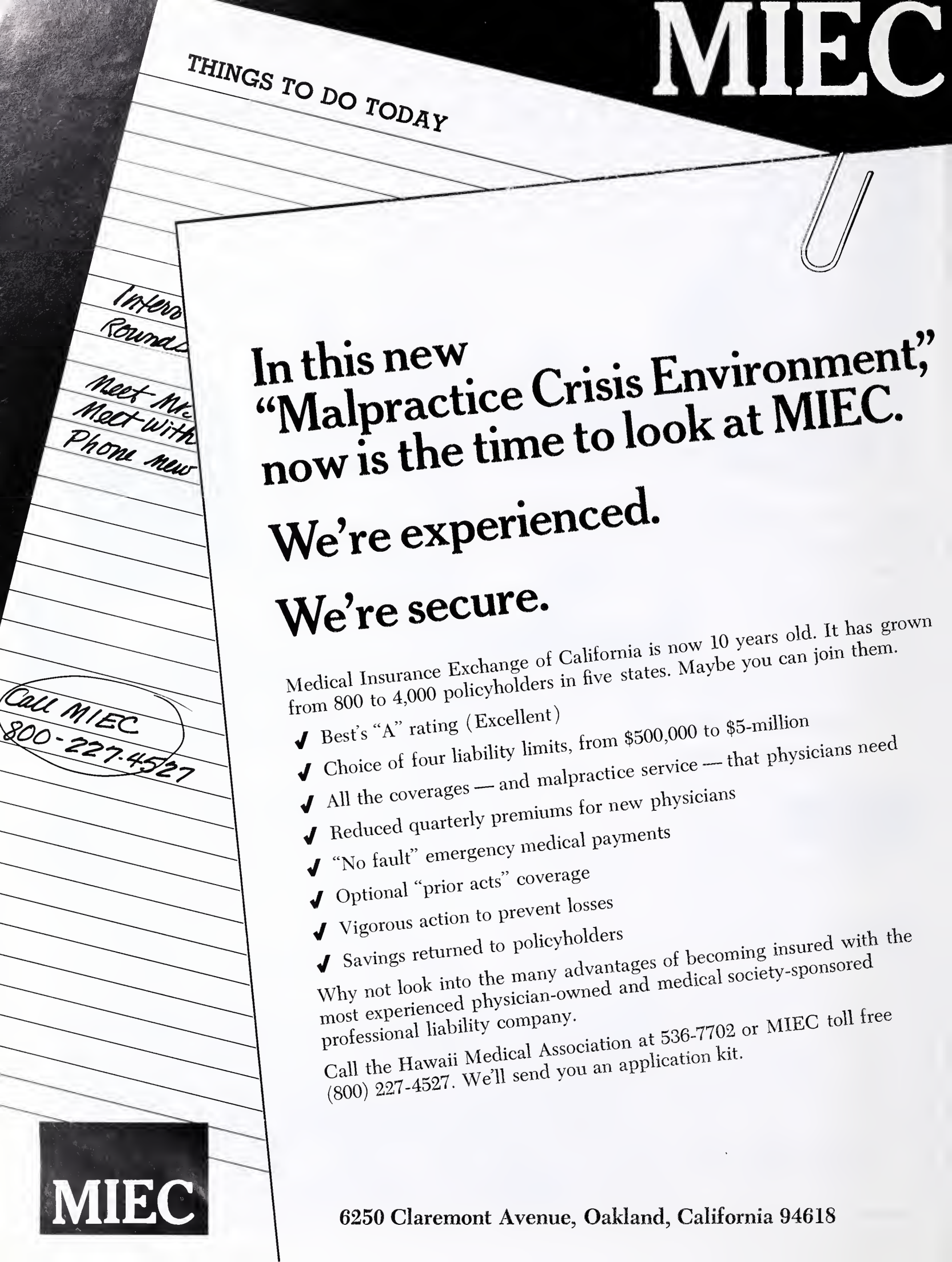
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(Continued from page 244)

confidential and any unauthorized disclosure of a report or record of a report is a misdemeanor. The director of social services may adopt, amend, or repeal rules, subject to chapter 91, to provide for the confidentiality of reports and records and for the authorized disclosure of reports and records. [L 1982, c 77, §3]

[350-7] Nonreporting; penalty. Any person subject to section 350-1.1 (a) who knowingly fails to report an incident which the person has reason to believe involves child abuse or neglect as required by this chapter or willfully prevents another person from reporting such an incident pursuant to this chapter shall be guilty of a petty misdemeanor. [L 1982, c 77, §4]



Over the Editor's Desk

National incidence figures (suspected by many to be understated) show that 1.1 million children are reported abused or neglected each year, and at least 2,000 die from abuse. The increasing attention the media are focusing on physical and sexual abuse of children does more than document the frequency of a serious problem. It reflects that now is the time for primary-care physicians and other medical specialists to recognize cases of child abuse in their own practices and to call into team action all of the professional resources that are readily available. (The Network for Continuing Medical Education, 15 Columbus Circle, New York 10023, (212) 541-8080).

* * *

The AMA is now alerting state licensing boards when licensure action has been taken against a physician in other states. The new procedure identifies physicians who, having been disciplined in one state, may attempt to practice in another jurisdiction where they hold a license. The AMA will use its computerized Physician Masterfile to speed communications between licensing bodies. State boards currently notify the Federation of State Medical Boards of actions taken, and the FSMB reports in a monthly summary the jurisdiction that took the disciplinary action. The AMA checks the FSMB summary against the Masterfile and informs each board by letter when

(Continued on page 250)

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The 1% Law

Becky Kendro, Assistant Executive Director, Hawaii Medical Association

Hawaii's joint tortfeasors law (Hawaii Revised Statutes 663 — 11 to 17) enables an injured person to collect all damages from any one *of a number of defendants found at fault. If any of the co-defendants lacks financial assets such as insurance or other property, the plaintiff may recover his entire award from a single co-defendant even though that co-defendant may be only 1% negligent. The person with the assets becomes a "deep pocket."*

The joint tortfeasors law invites lawsuits against the state and county governments, physicians, hospitals and others with known financial resources. Accordingly, these parties become the "deep pocket" target, even though their share of fault is low or virtually non-existent.

A recent example is *Baptiste v. Matsuura and Silva,* a trial that took place in Hilo, Hawaii, in April 1985. In 1976, a 6-month-old child, Shelbie Ann Baptiste, was brought to a pediatrician, Dr. Ruth Matsuura, for a well-baby checkup. The child seemed to favor her left arm, which was found to be fractured. The physician referred the child to an orthopedic specialist after questioning the mother, who was convinced that it was purely an accident that had occurred when the baby rolled off a bed. The baby was under the care of a babysitter, Gertrude Silva during the day. The specialist concurred that the fracture could have been caused accidentally.

Eight months later, the child was rushed to the hospital in a coma, where she died as a result of four skull fractures. In 1977, the babysitter was indicted and then convicted of manslaughter, and was sentenced to 10 years in prison.

During the recent trial, which was the result of the subsequent suit, it was learned that although the child had on several occasions suffered bruises and a ruptured eardrum, Dr. Matsuura had not seen any of these or any other evidence during well-baby checkups that would have indicated the child had been abused. The father was a member of the police force at the time which had been trained by Dr. Matsuura to detect child abuse. The Baptistes considered Gertrude Silva to be one of their very best friends. Not until after Shelbie's death did they learn that in 1966 the babysitter's own child had been found at the bottom of a trash chute on Oahu.

In addition to the $3 million suit filed against Dr. Matsuura and the babysitter on behalf of the estate of Shelbie Baptiste and by the parents, three other suits were filed. The Baptistes filed against their homeowner's insurance policy for $100,000 for the accidental death of their daughter. The Baptistes also filed suit against the corporation that owns the building where Dr. Matsuura and 15 others have offices and who were members of the corporation. A counterclaim was filed by Dr. Matsuura against the estate of Shelbie Baptiste, maintaining that there was no negligence on the part of Dr. Matsuura and that the parents should have known inappropriate care was given their child by the babysitter. This counterclaim against the parents required the jury to allocate percentages of fault among all defendants.

The trial began April 1, 1985, nine years after Shelbie's arm fracture occurred.

The homeowner's insurance company settled its case shortly before the trial began and the Baptistes received $45,000. The claim against the corporation that owned the building complex was dismissed with prejudice. The jury found the babysitter 90% negligent, the parents 5%, and Dr. Matsuura 5% negligent for failure to report suspected child abuse.

Unless Dr. Matsuura files and wins an appeal, her malpractice insurance carrier will become the "deep pocket" and pay the entire award of $117,000 minus the 5% negligence assigned the parents and minus the $45,000 settlement from the homeowner's insurance policy. The babysitter has no known financial resources.

The joint tortfeasors law forces defendants to spend more money in defending such cases or settling than might have to be paid in actual compensation cases on a percentage basis. For example, a defendant may have only 1% liability and still end up paying the entire award. It is estimated that the defense costs in the Matsuura case, as well as the defense of the partners of the corparation, exceeded several hundred thousand dollars.

The Hawaii Medical Association, the state and county governments and others have testified before the Hawaii State Legislature for changes in the joint tortfeasors law to limit the liability to only each person's share of the fault.

Plaintiffs' lawyers argue that the injured party must be compensated regardless of the paying party's degree of fault. HMA believes other mechanisms already exist or can be improved upon to provide for just compensation to the injured party through insurance and other sources.

A related consideration in this particular case is the impact of the child-abuse law (HRS Chapter 350), which requires physicians, the police, teachers or any person who has knowledge of such abuse to report such suspected abuse.

While there is no question that the abused child needs protection under the law, there are serious problems with reporting.

Will friends, relatives, neighbors or professionals be able, in good conscience, to report apparent or alleged abuse, not knowing for certain whether such is a positive fact or a vague surmise? Can the fear of the "deep pocket" on the part of such persons or agencies cause them to over-report?

This tortfeasors law is robbing taxpayers, causing medical malpractice insurance premiums to soar and instilling fear and defensive paranoia in law-abiding citizens.

The 1% law must be changed in order to make sure that any party found guilty of negligence pays his fair share and not more. Our society must express its desire for this change in the law to the 1986 Legislature.

Accepted for publication May 1985



Editorial

This is my mana'o

As usual, Bill Hindle zipped through the May 3 HMA Council meeting and still allowed ample discussion of the issues listed in a long agenda.

According the "Hecva" (when spoken) — HCFA (the acronym) — Health Care Financing Administration (our federal "Big Brother"), a national fee schedule applicable "across the board" from Boston to Honolulu, Seattle to Miami, with no differential for any reason, is likely to be with us in two years.

ACOG reports that as of August 1983, the outcomes of medical malpractice (MMP) lawsuits were: Suits dropped 23%, settled out-of-court 42%, and MD defendant lost 2%, won 10%. The remaining 23% were still in process.

Lila Johnson of the HMA Auxilliary displayed a white nylon "banner" as long as the width of most auto rear windows with bold red letters spelling: "CALL POLICE." She explained that women who drive alone at night and have car trouble should stop on the roadside shoulder, roll up the windows, lock the doors and affix the banner to the inside of the rear window (the banner has sticking-tape squares at all four corners for that purpose), then wait patiently. We should have asked about the logistics of crawling around inside the car while wearing a muumuu. A very good idea, however. The banners can be ordered from HMA.

A la AMA, the HMA will develop meetings of "sections" at the 129th annual meeting this October. This was approved by the House of Delegates in the past. Planned are these sections: a) Hospital Medical Staffs, b) Resident House-Officers and c) Medical Students.

The Legislative Report: Becky Kendro stated that the 10% cut in Medicaid reimbursement will be restored as of July 1, 1985, but to pre-September 1983 levels, which takes it back to 1979. Does anyone remember that the Hawaii RVS fee schedule was published in 1970?

The most recent legislative session authorized $25,000 to be used to study the MMP insurance problem. At last: Our camel's nose is in the tent of the mighty, or should we say "by one nostril"?

She flew to Hilo to find out for HMA from Ruth Matsuura the details of her predicament. A jury in court adjudged her 5% guilty in a child abuse case (the infant, abused by a babysitter, later died of more abuse), the parents 5% and the baby-sitter 90% responsible. However, since the latter two entities had no funds, Dr. Matsuura, as the "deep pocket" (because she had MMPI, perhaps?), is being held liable for the entire award (considerably less than the $3 million in the suit) in compensation to: The child? No, no! It expired. To the estate! The "rest of the story" is in this issue of the JOURNAL.

Our leaders are still looking for a PR individual to serve HMA's purpose, which is to "improve the public's image of the profession." The search will be in-house as well as elsewhere. The treasurer and the finance committee indicate that funding for such a position already is "in the budget."

* * *

From Bill Hindle's blue newsletter that goes to all physicians in Hawaii, HMA members or not, every month:

The AMA reports that in 1982, "there were 470 people for every physician in the United States, as compared with 703 to 1 in 1960 (it does not specify whether these are practicing physicians).

Statewide today we have about 1,600 practicing physicians with patient contacts. Our population is just more than a million, which makes our ratio 625 to 1. This is hardly a "glut" of doctors!

J.I. Frederick Reppun, MD



HMA nets AMA membership award

AMA Board of Trustees Chairman John Coury, MD (right) congratulates HMA President William Hindle, MD for the Hawaii Medical Association's achievement in exceeding prior year AMA membership. Increased AMA membership among Hawaii physicians during 1984 made it possible for HMA to receive this award for the fourth consecutive year.

(Continued from page 247)

one of its licentiates has had his or her license revoked, suspended or limited. "This action is being taken in the wake of national disclosures and concerns regarding credentialing abuses," said the AMA Division of Survey and Data Resources.

* * *

Ross Laboratories has announced the availability of ROSS SLD (Surgical Liquid Diet, a highly fortified, juice-like supplement for patients restricted to clear liquid diets. ROSS SLD provides calories and other nutrients that are deficient in the traditional clear liquid diet.

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* * *

A collection of articles on acquired immune deficiency syndrome (AIDS) from the Centers for Disease Control (CDC) is available from the federal government. Reports on AIDS contain all articles on AIDS that appeared in the CDC Morbidity and Mortality Weekly Report from June 1981 through January 1985. The 49 articles are arranged in chronological order. They track the reporting of information on AIDS from 1981, when the CDC first published information on Kaposi's sarcoma and Pneumocystis carinii pneumonia *occurring. To order, write the National Technical Information Service, 5285 Port Royal Rd., Springfield, Va. 22161. Request reports on AIDS (Publication No. PB85-162139/-KBB). Enclose a check for $6 for each copy ordered.*

* * *

The Soviet Union's Moscow Research Institute of Eye Microsurgery has signed a licensing agreement with Medical Technology Development Corp. (MEDTECH), a U.S. company, providing for the exclusive manufacturing and marketing of Soviet-developed eye surgery products in the U.S. and 13 other Western countries.

The licensing agreement, which covers all existing and future products developed by the institute, is the first between the Soviet Union and the United

(Continued on page 257)

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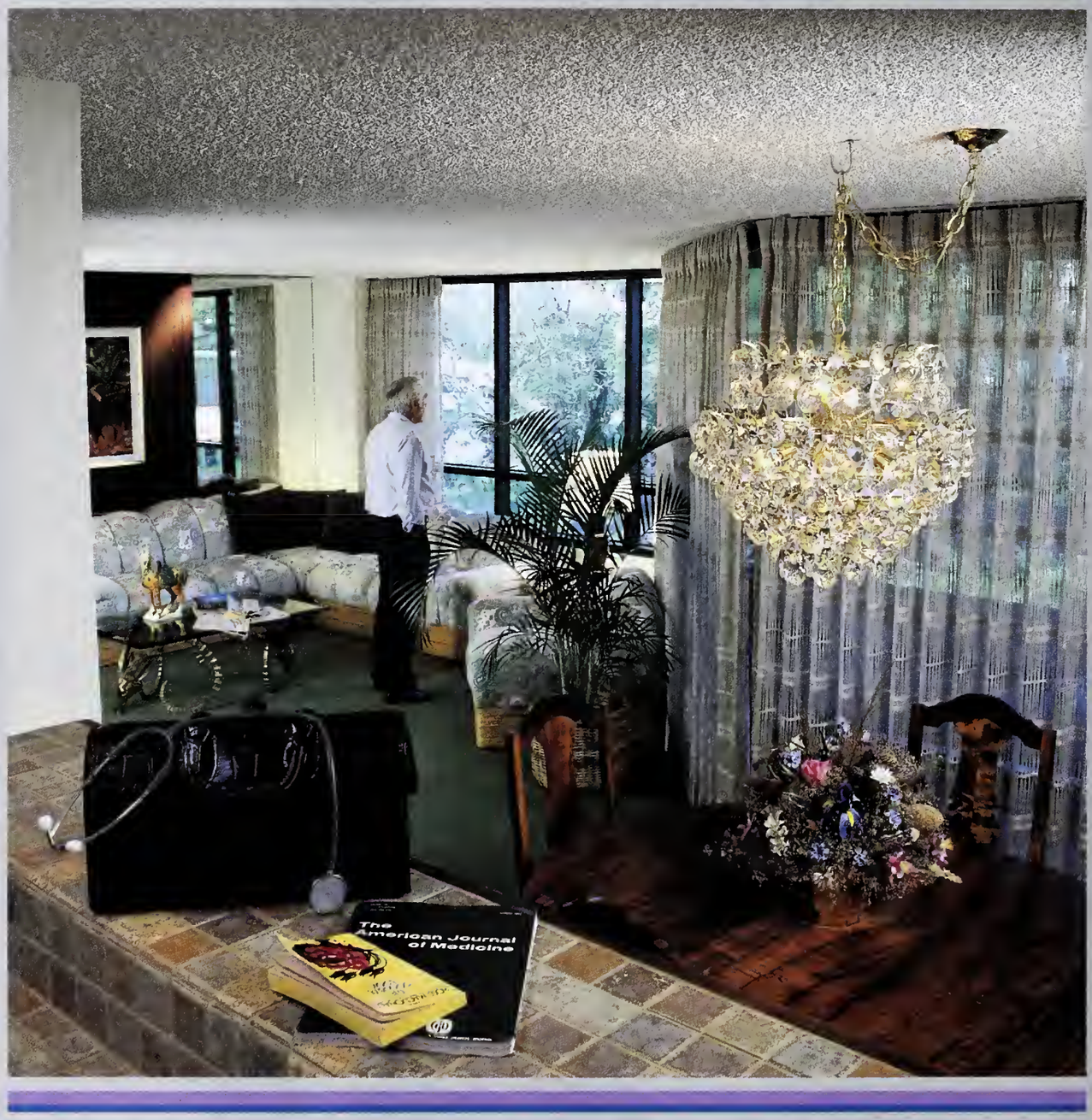
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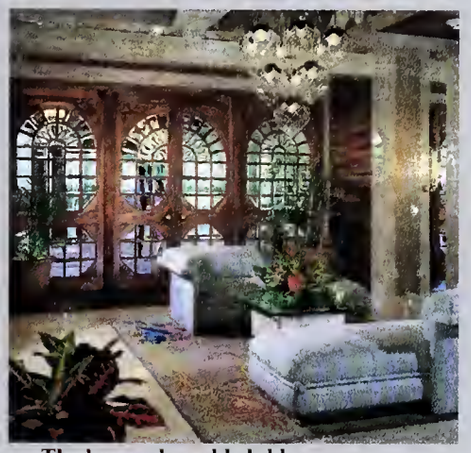
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The koa and marble lobby.

"The koa was trimmed, matched by hand, and numbered for placement so that the pattern of the cabinets would repeat itself throughout the kitchen and the grain continue down from the face of the cabinet to the drawers. In spite of these efforts, the first three sets of cabinets delivered to the project were rejected until an uncompromising level of quality was obtained.

"After we acquired the koa wood for Punahou Cliffs, the State of Hawaii declined to renew logging permits, cutting the supply of wood in half and increasing its cost by 50 percent... if it can be found at all."

—John Lyles, Developer

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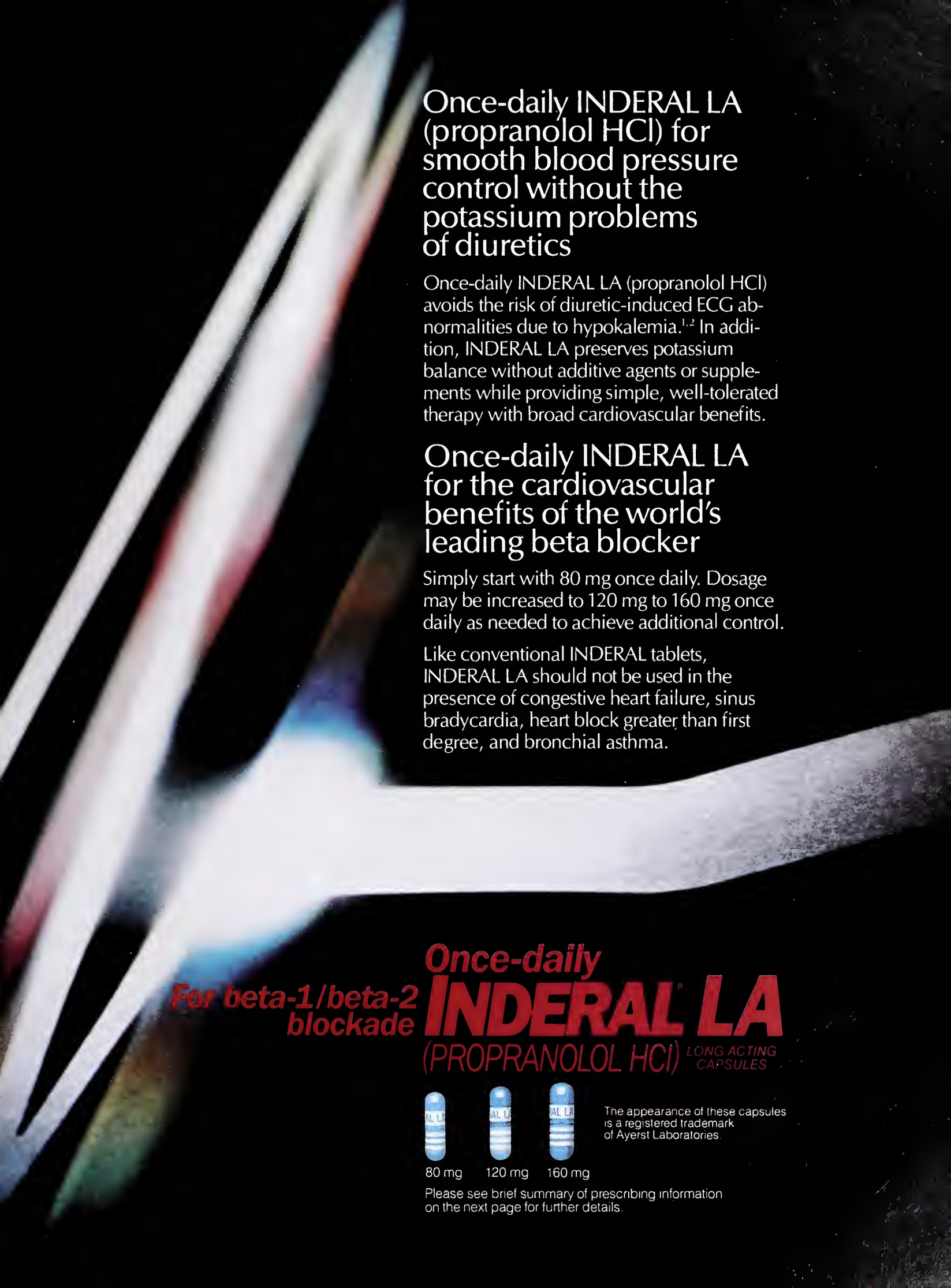
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General.* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block; hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299.

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(Continued from page 250)

States for ophthalmic medical technology. Professor Svyatoslav Fyodorov, internationally known for his research in the development of intraocular lenses and for his radial keratotomy surgical procedure for curing myopia, signed the agreement for the Moscow Research Institute of Eye Microsurgery, the world's largest institution devoted to eye surgery. Fyodorov heads the institution, which employs more than 1,900 surgeons, engineers, biologists, chemists, physicists and other personnel.

Fyodorov is reputed to be the world's leading researcher in the field of ophthalmic surgery and has contributed much to the modern surgical techniques and corrective surgical procedures. He is the developer of "radial keratotomy," a technique for the correction of myopia by surgical intervention that was dismissed for years by the rest of the world as too radical or "Russian Roulette."

Today, the procedure is practiced throughout the world and Fyodorov is hailed by his colleagues as a genius. It is safe to say that there is not a single practicing ophthalmologist in the world today who does not know his name and his reputation.

Among the products included in the license is a newly developed intraocular lens (IOL) made from a patented high-index soft silicon material that Fyodorov says weighs only .005 gram in the fluid of the eye and can be implanted through an incision as small as 2 mm. This, he claims, will allow future IOL implantation to become a regular out-patient procedure.

Other products to be manufacturered in the United States under the license will be a diamond-blade microsurgery knife with an edge measuring only 50 atoms thick; patented instruments for radial keratotomy; and a computer software package for determination of surgical parameters for radial keratotomy. MED-TECH will manufacture the silicon lens and other products in a new facility in the Clearwater-St. Petersburg area of Florida. Interim U.S. offices are at 90 John Street, 27th Floor, New York City.

* * *

"Informed Consent: Its Meaning and Application," the second program in the four-part National Patient Injury Prevention Program educational series produced by CMSS under a grant from the John A. Hartford Foundation, Inc. of New York was previewed at the CMSS Spring Meeting, March 19, 1985. CMSS member specialty societies will receive a complimentary copy of the new 26-minute program, which contains 67 slides and an audible and inaudible pulse tape. The third program on Medical Records will be available this summer. This will be followed by a final program on Physician/Patient Communications later in the fall.

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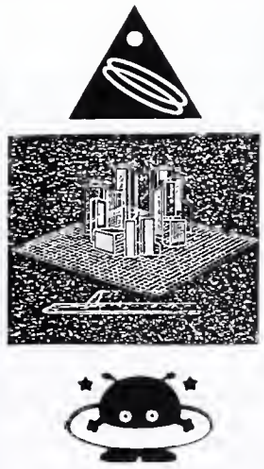
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From the Kahuna Lapa'au *(Medical Doctor)*

"Hey, Doc! Come quick on top you hoss. My daughter look like make* when she fall down!" Bang went the drumstick. (In olden times, they hung up the drumstick just like you hang up the phone.)

Hm-m-m. If I didn't know by the direction of the drum-beat from nearby pu'u Ohulehule* I wouldn't have known who called. Anyway, I went. Naturally, it took a while to climb the slopes of Waikane* on my Kona Nightingale,* starting as I did from my office at Ka-awa-koa.*

"Hoo-y, you stupid pake-kanaka!* Whassamata you call me my lunch hour? I see da young wahine* laughing. What you mean 'make'? You make one joke, I goin' ask Hi'iaka get angry wit' you!"

"No, no, Doc! I no make funny kine! I swear by all my aumakua* dat when I bin' 'phone' you, da wahine fall down all-same make."

"Lissen good. I goin teach you: Man, jus' like woman, can faint. You know what I mean, faint? Da warrior, he stand up straight like one spear fo' salute da alii. He nevah move one muscle an' da sun hot. Pretty soon, kapow, he fall flat on top his face unconscious. Da wahine mo' easy, suppose she huhu* or 'tink nobody love her. You gotta learn: Da blood-pump gotta work hard fo' make da blood go up six feet an' down again an' up again — roun' trip in one minute. Suppose you no mo' blood inside you coconut one second, you goin' pass out!"

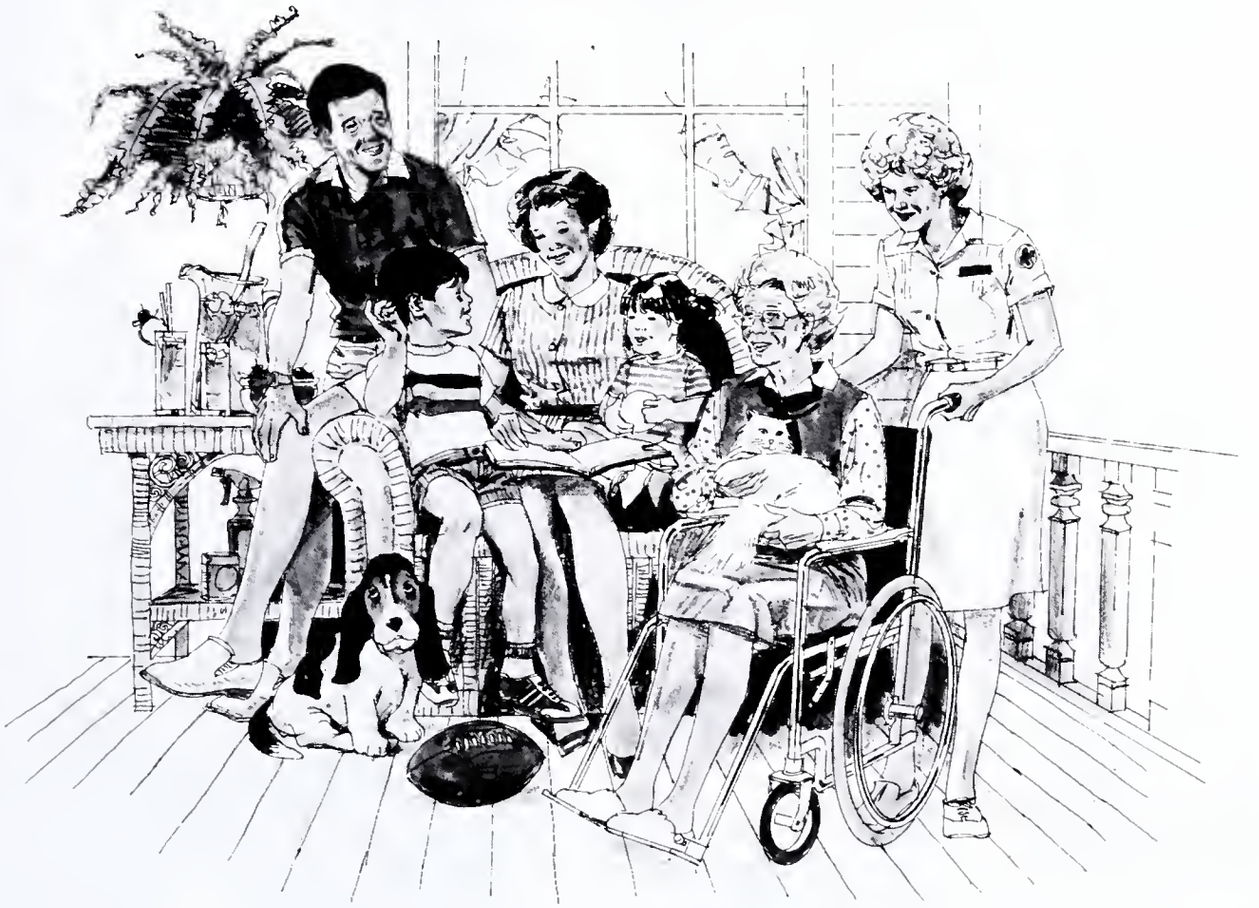
Yeah, Doc, but what I goin' do? Da mother screeming at me: 'Do something!' "

"Nothing. Leave 'em lay. Suppose da head below da feet, da blood goin' flow back inside da noodle an' da brains goin' unscramble. Dass why put da feet mo' high dan da head an' wait little while. Whassamata you don' know you own body? You old tutu* nevah teach you?"

I got aboard my old jackass which

(Continued on page 261)

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(Continued from page 258)

knows its way home to my heiau* and at least had myself a snooze before post-meridian office hours. It was my day for the well and worried well.

Aloha.

Footnotes to the above
make = dead
Ohulehule = a peak on O'ahu
Waikane = Valley in windward O'ahu
Kona nightingale = donkey
Ka-awa-koa = place on O'ahu
pake-kanaka = Chinese-Hawaiian
wahine = woman, girl
Hi'iaka = Hawaiian goddess
aumakua = personal protective gods
huhu = angry
tutu = older female guardian
heiau = temple



AMA-ERF Checks to UH School of Medicine

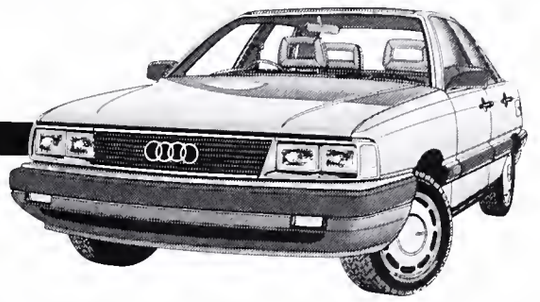
Lila Johnson, HMA Auxiliary president, presented two checks to the John A. Burns School of Medicine from the American Medical Association Education and Research Foundation. The checks, totaling $6,049.49, were given to Dean Terence A. Rogers at the 1985 graduation ceremony on May 18, 1985, at the Biomedical Sciences Building. One check was restricted to the Medical Student Assistance Program and the second, which is intended for the pursuit of excellence in the medical school's program, was not restricted. The money was raised through the efforts of county and state fundraisers for AMA-ERF.

1985 Annual Convention of the American Medical Association Auxiliary

As delegates from Hawaii, Lila Johnson, president, and Ella Edwards, nominated president-elect, attended the annual AMA Auxiliary Convention in June in Chicago. Highlights at the convention were speeches by Mark Russell, political humorist; Uwe E. Reinhardt, Ph.D., economics professor from Princeton on "The Health Care Brawl"; and Florence Littauer, nationally acclaimed author and speaker, on "How to Understand Others by Understanding Yourself."

The keynote speaker was U.S. Sen. David Durenberger of Minnesota, who addressed the issue, "Health Care in America," at the opening meeting of the 62nd Session. Mary Kay McPhee of Missouri was installed as president of the AMA Auxiliary for 1985-'86.

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Shakespeare (King Henry VI, Part II,
Act IV, Sc. 2, Ln. 86)

Spurious

Charles S. Judd Jr., MD

Egerton Y. Davis (a pseudonym) has practiced surgery for three decades. As a medical staff member of a Honolulu hospital, he takes emergency calls twice a month. If an emergency patient coming to the hospital has no regular surgeon, the patient is treated by the staff physicians and referred, for follow-up outpatient care, to the surgeon on call for that day.

A 21-year-old male busboy came to the above-mentioned hospital emergency room with small superficial cutaneous abscesses at the sites of abrasions on his legs that he had received while swimming at Keehi Lagoon. His tetanus immunization was up to date.

Treatment consisted of minor incision and drainage of the abscesses, using a #18 needle, application of Povidone iodine dressings and a prescription for dicloxacillin 250 mg. qid, #28. He was instructed to see Dr. Davis, the surgeon assigned for emergency calls that day, in two days.

Two days later, the patient saw Dr. Davis in the latter's office. His temperature was 97.8 degrees. The infected abrasions of the legs and feet still revealed purulent exudate, but the patient stated they were improved. There were no enlarged or tender lymph nodes in the inguinal region.

Dr. Davis told him to rest at home, continue the dicloxacillin and remain off work. This was the one and only time he saw the patient.

Three months later, the patient phoned Dr. Davis stating he had more infected abrasions on his legs, and requested a refill of the prescription for dicloxacillin. This was granted.

Dr. Davis heard nothing more from this patient until two and a half years later when he received a communication from the Medical Claims Conciliation Panel, stating that the busboy was bringing a claim against Dr. Davis, another physician, the hospital emergency room and various employees, medical assistants and nurses. The claim stated that the original cutaneous abscesses resulted in "staphylococcoses" which in turn caused osteomyelitis when the patient underwent an operation by another physician for a knee ligament injury.

Dr. Davis was required to respond to the claim, and in due course an attorney was retained. At an MCCP hearing, the busboy claimant did not appear. Neither did his two attorneys, one from Honolulu and one from California. A colleague of the Honolulu attorney appeared at the hearing, but was not totally prepared to pursue the busboy's claim.

The panel found no negligence on the part of Dr. Davis. Shortly after this Dr. Davis received a routine letter from a Honolulu hospital for renewal of privileges Characteristically, it asked the question: "Are you or have you been a named defendant in any malpractice claim and/or suit since your appointment or last reappointment?"

Dr. Davis answered this affirmatively, and soon received another letter from the senior vice president of that hospital, saying they would "appreciate knowing the outcome of the MCCP hearing." Upon Dr. Davis' learning of the panel decision of "no negligence," this information was submitted to the hospital.

A few weeks later, an application for malpractice insurance with a new company posed this "fill in" statement to Dr. Davis: "I have had the following number of claims and/or suits for alleged error, mistake, or malpractice brought against me within the past 10 years " Dr. Davis duly filled this in positively.

Similar requests probably will be forthcoming, and each will constitute a "black mark" against Dr. Davis, permanently coloring his records at various hospitals and insurance companies.

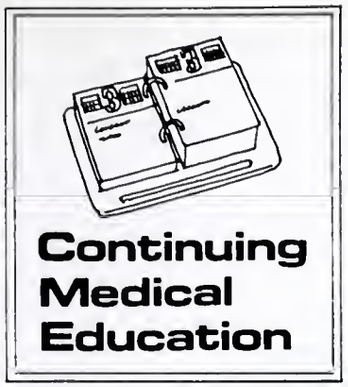
The whim of an attorney to "sue everybody connected with a case" so as to be sure to tap the "deep pocket" insurance monies available appears to be justified in the eyes of unscrupulous lawyers. Little thought is given to the integrity or reputation of physicians involved.

If the case is spurious, such a claim should provoke a countersuit, although the latter is costly and often not worth the trouble. What is really needed is for the law profession to clean its own house of members who are guilty of legal malpractice.

Perhaps a higher incidence of claims and suits originate with patients who have no regular physician, and who are seen only on a transitory basis in emergency rooms. This incidence might make physicians and surgeons reluctant to be part of a referral roster of an emergency unit which, in turn, will promote more depersonalization of medical care and a further erosion of physician-patient relationships.

The relationship of physician and patient, one-on-one, is time-honored, personal and private, and should be respected. Erosion of this bond by government, third-party payers, gate-keepers, attorneys and even hospitals should provoke physicians to stick together, respect each other, resist outside forces and keep, as a primary goal, their obligation and duty to their patients.

Accepted for publication May 1985



CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS

ONGOING

For a complete list of ongoing programs, please refer to the March 1985 issue of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

July 8-12, 1985	International Congress on Radiology, Hawaii Radiology Congress, Sue O'Malley. Travel Agent: Passport Travel, 6340 Glenwood, Clover Leaf, Bldg. #7, Overland Park, Kansas 66202. Location: The Westin Ilikai Hotel, Honolulu.
July 13-20, 1985	Cardiovascular Medicine and Surgery, Stanford University Medical Center, Office of Postgraduate Medical Education, Room TC 129, Stanford, Calif. 94305. (415) 497-5594. Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
July 19-26, 1985	The First Annual Alaska Hawaii Seminar — The Restructuring of Medicine, Pacific Health Research Institute, Thomas Square Centre, 846 S. Hotel St., Suite 303, Honolulu, Hawaii 96813. 524-4411 (Wally M. Izumigawa). Location: Prince of Wales Island, Alaska.
July 24-26, 1985	Strategic Therapy, Kahi Mohala Healthcare Learning Institute, P.O. Box 1358, Ewa Beach, Hawaii 96706. 671-8511 (Dana Zichittella). Location: Hawaiian Regent Hotel, Honolulu.
July 20-27, 1985	Innovations in Primary Care IV: Topics of Concern in the '80s, New York Medical College, Department of Pediatrics, Valhalla, N.Y. (800) 645-2200. Location: the SS Independence (cruise among Hawaiian Islands).
Aug. 5-9, 1985	ECG Interpretation and Arrhythmia Management, International Medical Education Corp., 64 Inverness Drive East, Englewood, Colo. 80112. (800) 525-8651 (Beverly Jacobsen). Location: Waikiki.
Aug. 9-13, 1985	Advances in Internal Medicine, American College of Physicians, (800) 523-1546. Official Travel Agent: GTU, INC., P.O. Box 2198, Honolulu, Hawaii 96805. 922-0844. Location: Stouffer's Wailea Beach Resort, Maui.
Aug. 9-18, 1985	Conference on Clinical Anesthesia, Educational Programs Division of the California Society of Anesthesiologists. (415) 348-1407, Location: Maui.
Aug. 10-17, 1985	Ophthalmology, USC School of Medicine, Postgraduate Division, 2025 Zonal Ave., KAM 307, Los Angeles, Calif. 90033. (800) 421-6729, (800) 321-1929 (Calif.), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa St., Suite 217, Los Angeles, Calif. 90007, (800) 821-5094, (800) 521-6511 (Calif.), (213) 746-1384. Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
Aug. 10-21, 1985	28th Annual Hawaii Refresher, USC School of Medicine Postgraduate Division, 2025 Zonal Ave., KAM 307, Los Angeles, Calif. 90033. (800) 421-6729, (800) 321-1929 (Calif.), or (213) 224-7051. Travel agent: USC Emergency Medicine, 3500 South Figueroa St., Suite 217, Los Angeles, Calif. 90007. (800) 821-5094, (800) 521-6511 (Calif.), (213) 746-1384. Locations: Sheraton Waikiki and Maui Marriott.
Aug. 11-17, 1985	CSA Hawaiian Seminar on Clinical Anesthesiology, California Society of Anesthesiologists, 100 South Ellsworth Ave., Suite 806, San Mateo, Calif. 94401. (415) 348-1407. Location: Maui.
Aug. 16-19, 1985	Neuropsychological Testing: A Workshop on Application, Techniques, and Indications, Southern California Neuropsychiatric Institute. (619) 454-2102. Location: Poipu Beach, Kauai.
Aug. 25-28, 1985	Aging: Neuropsychiatric Considerations XII Annual Symposium, Southern California Neuropsychiatric Institute. Location: Mauna Kea Beach Hotel, Kohala, Hawaii.
Aug. 26-29, 1985	Cardiology Update, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677. (714) 495-4499. Location: Maui.
Aug. 28-Sept. 1, 1985	Controversies in Urology, American Urological Association, (713) 791-1470. Location: Sheraton Waikiki Hotel.
Sept. 9-13, 1985	First Annual Masters International Diagnostic Radiology Conference, Maurice Reeder, MD, 1356 Lusitana St., #502, Honolulu, Hawaii 96813. 531-6471. Location: Baden Baden, West Germany.
Sept. 14-21, 1985	Topics in Emergency Medicine, State University of New York, Downstate Medical Center and International Conferences, 189 Lodge Ave., Huntington Station, N.Y. 11746. (516) 549-0869. Location: SS Constitution (cruise among Hawaiian Islands).
Sept. 25-30, 1985	Association of American Physicians and Surgeons, Inc., 5201 Lyngate Circle, Burke, Va. 22015. (703) 425-6300 (Sue Ackley). Location: Hotel Inter-Continental, Maui.
Sept. 28-29, 1985	First Responders Treatment of Burn Patients, Straub Clinic and Hospital, 888 South King St., Honolulu, Hawaii 96813. 523-2311 (Joan White). Location: Honolulu.

Sept. 29-Oct. 4, 1985	Symposium on the Prevention of Osteoporosis, Conference Coordinator, Osteoporosis Center, Kuakini Medical Center, 347 North Kuakini St., Honolulu, Hawaii 96817. 547-9578. Location: Westin Ilikai Hotel, Honolulu.
Sept. 29-Oct. 4, 1985	Congress of Neurological Surgeons, University of Maryland Hospital, 22 South Green, Baltimore, Md. 21201, Michael Salcman, MD. (301) 528-2905. Location: Sheraton Waikiki Hotel.
Oct. 12-19, 1985	Gastroenterology: A Review, State University of New York, Downstate Medical Center and International Conferences, 189 Lodge Ave., Huntington Station, N.Y. 11746. (516) 549-0869. Location: SS Constitution (cruise among Hawaiian Islands).
Oct. 12-20, 1985	Annual International Body Imaging Conference, Department of Radiology, West Park Hospital, 22141 Roscoe Blvd., Canoga Park, Calif. 91304. (818) 340-0580. Travel Agent: Innovations in Travel, 9545 Reseda Blvd., Northridge, Calif. 91324. (818) 701-1164. Location: Maui Marriott Hotel.
Oct. 12-14, 1985	129th Annual Scientific Meeting, Hawaii Medical Association, Jennie Asato, HMA, 320 Ward Ave., Suite 200, Honolulu, Hawaii 96814. 536-7702. Location: Kona Surf Resort, Kona, Hawaii.
Oct. 19-26, 1985	Operative Arthroscopy, University of California at Los Angeles, Continuing Education in Health Sciences, 10995 Le Conte Ave., Room 614, Los Angeles, Calif. 90024. (214) 825-8423. Location: Maui Marriott Hotel.
Oct. 19-22, 1985	New Approaches to the Evaluation of Neoplastic Lymphoproliferative Disorders, University of Southern California, Department of Pathology, 2025 Zonal Ave., Los Angeles, Calif. 90033. (213) 224-7121. Location: Wailea Beach Hotel, Maui.
Oct. 17-26, 1985	CSA Hawaiian Seminar on Clinical Anesthesiology, California Society of Anesthesiologists, 100 South Ellsworth Ave., Suite 806, San Mateo, Calif. 94401. (415) 348-1407. Location: Maui.
Oct. 31-Nov. 2, 1985	Moral Issues in Medicine, National Federation of Catholic Physicians' Guilds, St. Francis Hospital, 2230 Liliha St., Honolulu, Hawaii 96817, Gail Okamura, Director of Education. 547-6410. Location: Hilton Hawaiian Village, Honolulu.
Nov. 1-6, 1985	ACOG District VIII Meeting, American College of Ob/Gyn, 600 Maryland Ave. S.W., Washington, D.C. 20024-2558. (202) 638-5577. Location: Hyatt Regency Maui.
Nov. 18-20, 1985	Hawaii Pediatric Gastroenterology Conference, Delia Chang, Continuing Medical Education, 1319 Punahou St., #816, Honolulu, Hawaii 96826, 948-6949. Location: Kapiolani Women's and Children's Medical Center, Honolulu.
Dec. 26-30, 1985	Allergy, Drugs, and Drug Allergies, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Attention: Joe Harrison, MD. 879-8182 or 661-8032. Location: Royal Lahaina Resort, Maui.

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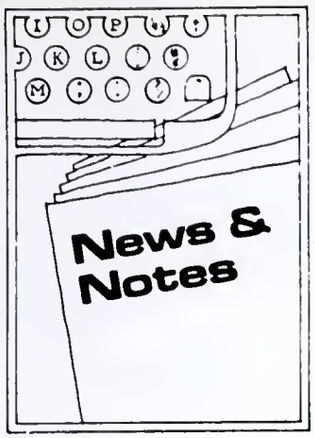
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Henry Yokoyama, MD

In a recent HMJ issue, **Florence Chinn**, medical consultant to the State Medical Care Administration Office, reported that Hawaii saved almost $1 million in 1983 by using a "lock-in" program for Medicaid. The "locking-in" program was started in 1977, in which patients who abused Medicaid benefits were assigned to one physician, pharmacy, clinic group, or hospital. Florence says that Hawaii's Medicaid program "has been and remains one of the most generous and comprehensive assistance programs in the 50 states. . . ."

Joel Greenspan, state epidemiologist, reported in February that the death rate from influenza and pneumonia was 11.1% for the first week of February and 12.3% for January. CDC reports that the nation's flu outbreak is the worst since the winter of 1980-81, when 52,000 people died during a 13-week epidemic . . .

A Tripler report published in JAMA and co-authored by **Marvin Kreber** and **James Bass**, chief of pediatrics, says that treating suspected cases of "strep" throat without waiting for test results reduces the patients' days of illness and the period of being contagious. . . .

How Others See Us . . .

Herein are excerpts from Maui News' superb staff writer Jill Engledow's coverage of **Dean Neubauer's** theory of the "medical-industrial complex." (Neubauer is dean of social sciences at the University of Hawaii).

He gave a talk at Maui Community College in March: "If medical costs keep escalating at the rate they have been, by the year 2000, 100% of the GNP of the U.S. will be devoted to medical care. . . . The federal government's tinkering with the payment system (Medicare and Medicaid) is not going to affect the real 'drivers' of medical costs. . . .

"If a legislator wants to do something about medical costs, he must look at three major 'drivers' of costs . . . one is the privatization by large-scale investors. . . . Whereas medical care used to be based on small, local entrepreneurial efforts, in the past 15 years there has been concentration of medical business in the hands of medical suppliers and large corporations (like the Humana Corp. in artificial heart research). . . .

"Fifteen years ago, most hospitals were small and privately owned, but by 1981 large numbers of hospitals and nursing homes in the country had been bought up by three large corporations . . . Another 'driver' of medical costs is the idea, created in the last 30 years, of 'medical care as a middle-class consumption item' . . . Since 1950, the number of people with some form of health insurance has skyrocketed, and a whole generation has grown up with the idea that medical care is 'free goods.' So medical costs go crazy because we all use it so much — or misuse it. . . .

"The third driver is technology, which becomes more and more expensive. . . . There is disagreement about whether it is the 'big ticket' or the 'little ticket' that is causing the most trouble. . . . 'Big ticket' technology alludes to hospitals that purchase the best equipment, e.g., CT-scanners, to attract doctors. . . . 'Little ticket' technology refers to the increasing number of tests done for each illness when patients check into the hospital. . . .

"Some argue that the doctors must practice defensive medicine in order to protect themselves from malpractice suits. . . . Some say that tests help keep a doctor's income up. . . . The doctor's overhead costs are such that he can't afford to spend much time with the patient, so he orders tests instead of talking to the patient. . . .

"The technology factor is an enormously complicated phenomenon and there are lots of arguments about how all three "drivers" tie in together . . . from the current 'technical expert' version of medicine to the 'environmentalist' view and the 'cybernetic' view. . . ."

Oncology Conference

Varoujan Chalian, professor, department of otorhinolaryngology, Indiana School of Medicine, and also professor and chairman, maxillofacial prosthetics department, Indiana School of Dentistry, is one of those rare intellects who can keep his audience laughing during a serious lecture. . . . Varoujan (who vaguely resembles Inspector Clouseau in the Pink Panther series) spoke on "Maxillofacial prosthetics for head and neck cancer."

Re: Maxillary obturator prostheses: "We say 'definitive' rather than 'permanent' because the patient wouldn't pay if we say 'permanent.' "

Re: Obturator design: "It is like creating a building . . . there has to be support, retention and stability. . . ."

Re: Before and after photos of a young woman with hemi-resection of her left upper jaw: "Now here, with the obturator in place, she has her kissing lips back again."

Re: Third-party payment: "Blue Cross doesn't pay a DDS. . . . We have a few crooks in dentistry . . . they put "dMD" instead of DDS and make the first "d" small. . . . They may get away with it for a while . . . Of course, *we* don't have any crooks in medicine. . . ."

Re: Obturators: "We like the terms 'top-less' and 'bottom-less' obturators . . . It exploits audience interest, especially when lecturing to the Armed Forces . . . "

Re: Nose reconstruction: "It's easier to make a nasal prosthesis for the whole nose than half a nose. . . . Armenian noses, Italian noses, Jewish noses and Greek noses are all alike — They are all big. . . . Even when someone says, 'I want a small nose,' we give them big ones because they haven't told their parents. . . ."

When Varoujan described a new technique using metal implants with magnets, instead of glue, to keep the prostheses in place, radiotherapist **Vince Brown** asked, "Can you do this on post-radiation patients?" He replied: "If my clinical judgment says 'go,' I go. . . . I always rely on my clinical judgment . . . but we never do anything without the permission and blessing of the radiotherapist. . . . Then, if anything goes wrong, we have company. I should add to my failures intelligently. . . . Actually I like to make mistakes. . . . When I make mistakes, I'm on the move. . . ."

Conference Notes . . .

Henry Marriott, clinical professor of medicine, Emory University, spoke on "Serious Ventricular Arrhythmias" at Straub's Third Annual Cardiology Update: "Proving a complete heart block is like proving fidelity . . . one is really put to the test. . . . It's like being in a motel with an attractive woman and coming out unscathed. . . ."

Re: Ventricular tachyarrhythmias: "The final court of appeal in arrhythmias is the EKG. . . . Lead II is the worst lead in differentiating V-tach etc. . . . Lead I or at least more than only Lead II. . . . Know all the causes . . . you see only what you look for . . . you recognize only what you know. . . ."

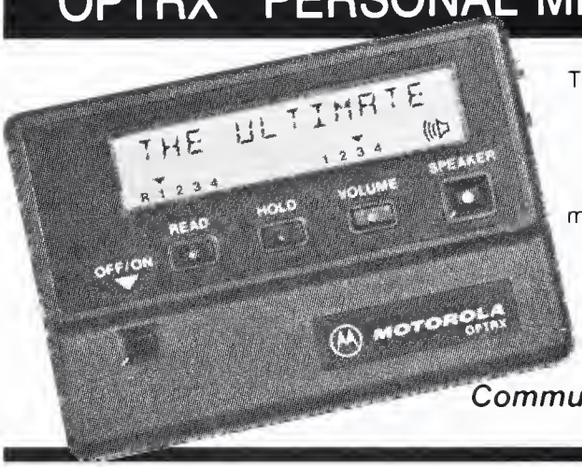
Re: Recognition of aberration: "V-tach is regular as clockwork in contrast to WPW with atrial fib. . . . It's safe to say that the woman in the man's arms is really his wife. . . . In conclusion, to para-phrase Cecil Rhodes' dying words, 'So much to say. . . . So little said.' "

Conference Dialogue

Pathologist **Eugene Yanagihara** and oncologist **Jeff Nakamura** had just brought us up to date on AIDS and HTLV viruses. . . . Moderator **Glenn Kokame** sounded worried: "How can we surgeons keep from getting AIDS? We



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might poke ourselves with a needle during a bone marrow aspiration or nick ourselves with a scalpel during surgery."

Jeff chuckled: "You might try triple-gloving and getting your resident to do the surgery. . . . Actually, a needle stick contamination with AIDS virus is probably insufficient contamination. . . . It has to be a heavy contamination with saliva or by sexual contact. . . . Dentists are at higher risk with the heavy salivary contamination. . . .

Personally, I think the Japanese form of greeting, i.e. bowing heads, rather than embracing and kissing each other, is safer. . . ."

The Humor of James Stewart

(From his lecture on CA of the prostate at the 2nd Larry French Memorial Seminar at Kuilima.)

"I have been warned that it is redundant to say 'prostatic cancer in men.' But then, on my way here this morning, I saw this sign, 'Live Plants for Sale'. . . .

"We have been told so often that a rectal exam is important for detecting prostatic cancer. May I also stress the importance of a two-finger rectal exam nowadays — to get a second opinion. . . .

"An Israeli came to America and studied American history in order to become a U.S. citizen. However, when he went to Texas, he learned other facets of American history not recorded in standard history books . . . e.g., George Washington was actually born in Texas; and he did not cut down a cherry tree, but a mesquite tree. . . . When his father confronted George, 'Did you cut down this mesquite tree?' George said, 'Yes, dad . . . I cannot tell a lie. . . . I did cut down the mesquite tree.' The elder Washington said, 'George, if you cannot tell a lie, we cannot live here in Texas.' So they packed up and moved to Virginia. . . ."

Life in These Parts . . .

Two real-life stories from eye-man **Tom Frissell's** files:

A Midwesterner named Mueller was visiting the Islands and came to see Tom for a pink eye. . . . Tom prescribed the usual and wanted to see him for a follow-up. . . . Mueller said he was leaving for Hilo the next day. . . .

So Tom yells in his usual gruff manner to his faithful nurse in the next room, "Say, Doris! What's the name of that Kraut ophthalmologist in Hilo?" Doris replied, "His name is **Gerrit Ludwig**" Mueller turned to Tom caustically, "Jah! Das ist Kraut name!"

A 250-pound woman confronted Tom on her first visit: "I've heard about you . . . don't you be abusive to me like you are to the others. . . ." Tom was taken aback, but regained his composure: "Don't worry . . . I'm married to a

(Continued on page 270)

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(Continued from page 260)

dragon myself. . . ." They got along well. . . . One day as Tom was strolling along the shopping center, the dragon woman tapped him on the shoulder and murmured sweetly, "How's that dragon wife of yours?"

Another true story: Mrs. E.C., a vigorous 72-year-old Caucasian wit, has a husband with early Parkinsonism. . . . She purchased an armrest for the toilet so he could get up without help. In installing it, he tried unsuccessfully to disengage the rusted bolts. . . .

After he sprayed them with WD-40, she put a throw rug on the vinyl floor, lay on her back and tried to use a wrench from below. . . . She yelled to her husband, hovering above, "Honey! You got too much oil on these nuts!" He lost his balance and fell on her . . . as he struggled to get up, she yelled instructions: "Honey! Bring your legs together and get up on your knees!" Then she blushed through her tan, wondering if her neighbors, a psychiatrist married to a lawyer, had heard and wondered. . . .

Miscellany (Contributed by Becky Kendro)

Scene at the race track: Five mares are entered in the third race. . . . A man goes to a window: "I put $1,000 on Blue Bell to win in the third." He goes to another window and makes the same bet. . . . Then he makes the same bet at a third window. . . .

A stranger has been watching closely and finally goes up to the man. . . . "I see you made three bets on Blue Bell to win. . . . I hate to tell you but I own Blue Bell and she is a plug. . . ."

The man says, "I ought to know a sure thing when I see one. . . . I own the other four mares. . . ."

Moses, leading his people, reached the Nile with the Egyptians in hot pursuit. . . . He gets ready to part the waters. . . . The engineer is skeptical, "If you part the waters, you'll have only a 15- to 16-foot-wide pathway and in no way can all the people cross." The attorney warns, "Be sure you have plenty of liability insurance because houses will be flooded and people will drown." But the PR man is encouraging, "Hey Mo! I'm not an engineer or attorney, but if you pull this off, I'll give you two pages in the Old Testament. . . ."

More Miscellany

A man with bulging eyes, ringing ears and nausea moans: "I'm going to die!" The locale for this is not a hospital emergency room, but a tailor shop. . . . The tailor says, "You can waste your money if you want, but you have 32-inch sleeves and a 16½-inch neck.". . . Man insists: "I've always been a 14-inch neck . . ." (As heard by **Claire Loo**, MSD rep, from **Sydney Fujita**)

Claire is now Mrs. Craig Nakatsuka (MD)/Ed.

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Biography

R. Varian Sloan, MD

Robert Gideon Benson, MD (1906-1983)

Dr. Benson served his community as a family physician for more than 50 years.

He was born June 17, 1906, in Richland Center, Wis., the son of Dr. Gideon Benson and the brother of Drs. George and Homer Benson, a long line and heritage of medical practitioners of the highest caliber. When he passed away after a brief illness on November 7, 1983, our noble profession lost one of its finest members, and I lost a good friend and a considerate colleague. He leaves behind his beloved wife, Ruth.

Dr. Benson was educated in Wisconsin and graduated from the University of Wisconsin School of Medicine in 1932. He came to Honolulu and served at Queen's Hospital as an intern and surgical resident, which trained him well for a long and productive life in the practice of high-quality patient care.

After a tour as ship's surgeon for the Dollar Line, he returned to Hawaii and took a position at Maunaloa, Molokai, as plantation physician for Libby, McNeill & Libby. His next post was as head of the civilian dispensary at Pearl Harbor.

After World War II, Dr. Benson joined his brother Homer in the private practice of medicine, obstetrics, and surgery at the Alexander Young Building in Downtown Honolulu. The two general practitioners also had an office at Halawa Housing for military dependents.

After Homer Benson retired and the Alexander Young building was demolished, Dr. Benson moved his office to the Gaspar building, aided by Mrs. "Fuji" Tokunaga, who had been the brothers' office assistant for 33 years. Fortunately for the practice, he was in the process of having a young successor, Ronald O. Lee, MD, take over in anticipation of his retirement in January 1984. He died just short of meeting that goal.

Dr. Benson brought to his patients a vast knowledge of medicine and a brilliant investigative mind. He was always thinking of his patients' welfare. He kept abreast of developments in medicine and attended medical meetings and classes all over the world.

While in Vienna, studying at the American Medical Society of Vienna's postgraduate seminar, he met Ruth Silberger. A romance began and flourished, and on December 31, 1963, they were married in Honolulu. The happiness in this marriage was to have been celebrated at a 20th anniversary on New Year's Eve 1983.

Dr. Benson became a member of the Honolulu County Medical Society and the AMA in February 1940. In November 1951, he joined the fledgling Hawaii chapter of the AAGP.

He was a 30-year member of Hawaii Lodge 21, the AASR of Freemasonry of Honolulu, and a Noble of the Mystic Shrine, Aloha Temple. He was a charter member of the Honolulu Kiwanis Club. He took pride in being a Son of the American Revolution. Throughout his life and medical career, Bob adhered to the high precepts of Freemasonry, which explains his concern for the patients who were under his care.

All of us — colleagues, friends and family — will miss his smile and wonderful sense of humor.



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Hawaii Medical Journal



The 100th Anniversary of the Kanyaku Imin

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CONTENTS

Editorials: 277
The 100th, 85th and 40th Confounders
J.I. Frederick Reppun, MD
A Great Idea
Michael Okihiro, MD
The Impact on Health
Grant Stemmermann, MD

Hawaii Academy of Family Physicians' Newsletter 282
Don and Marlies Farrell

Biography — Seiichi Miyasaki, MD 284
J.I. Frederick Reppun, MD

Articles:

The Immigrants' Hospital: Kuakini Medical Center 291
Masaichi Tasaka and Richard Suehiro

The Origins of Epidemiologic Studies of Heart Disease, Cancer and Osteoporosis Among Hawaii Japanese 294
Lance K. Heilbrun, PhD, Abraham Nomura, MD, Abraham Kagan, MD, and Richard D. Wasnich, MD

Coronary Heart Disease, Hypertension and Stroke Among Japanese-American Men in Hawaii: The Honolulu Heart Program 297
Katsuhiko Yano, MD, Dwayne M. Reed, MD, PhD, and Abraham Kagan, MD

Gastric Cancer Among the Japanese in Hawaii: A Review 301
Abraham Nomura, MD, Grant N. Stemmermann, MD, and Lance K. Heilbrun, PhD

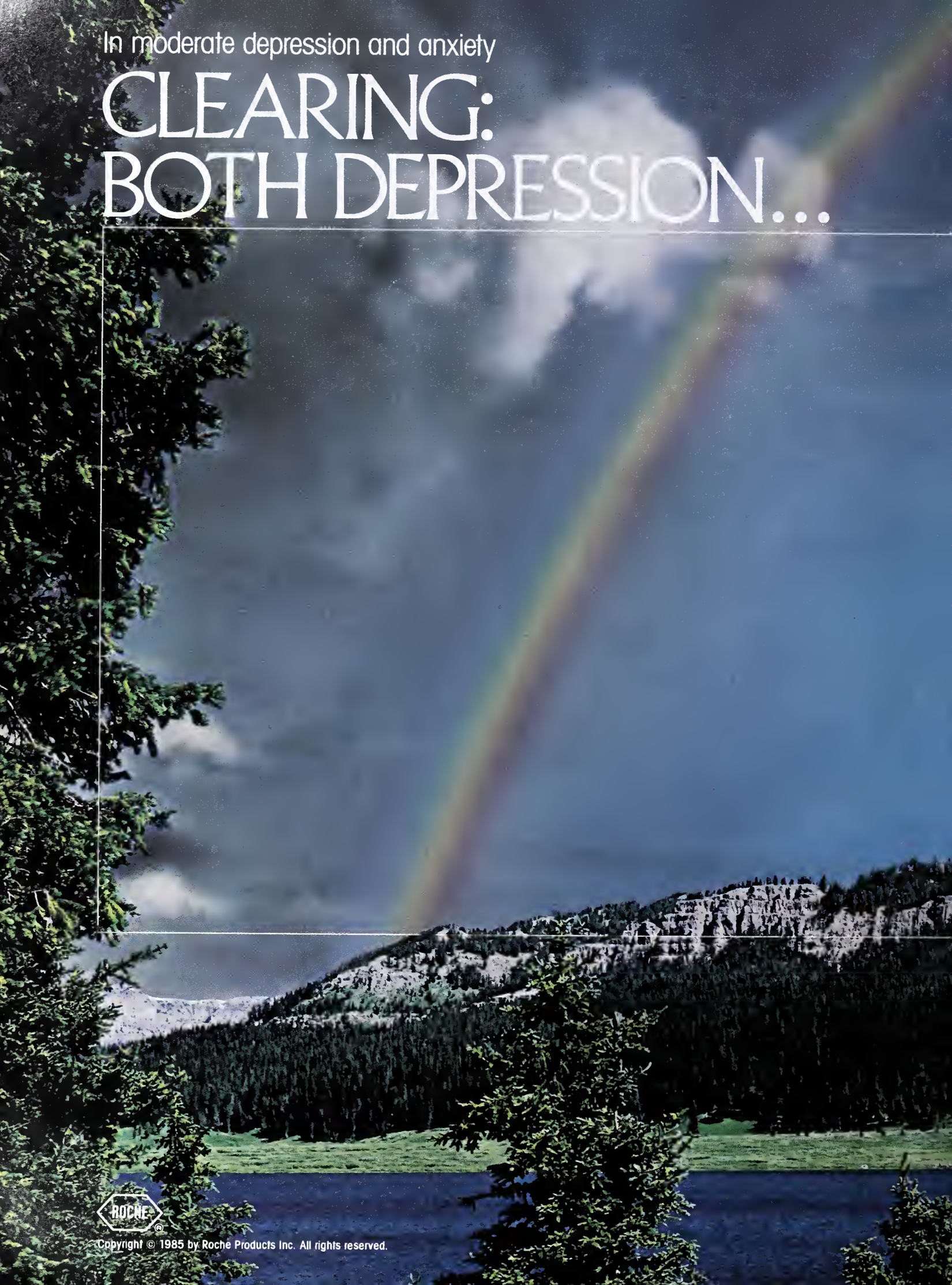
Colorectal Cancer in Hawaii Japanese 304
Grant N. Stemmermann, MD, Abraham Nomura, MD, and Lance K. Heilbrun, PhD

Predictors of Health in Men of Japanese Ancestry in Hawaii 307
Dwayne Reed, MD, PhD, and Richard Benfante, PhD, MPH

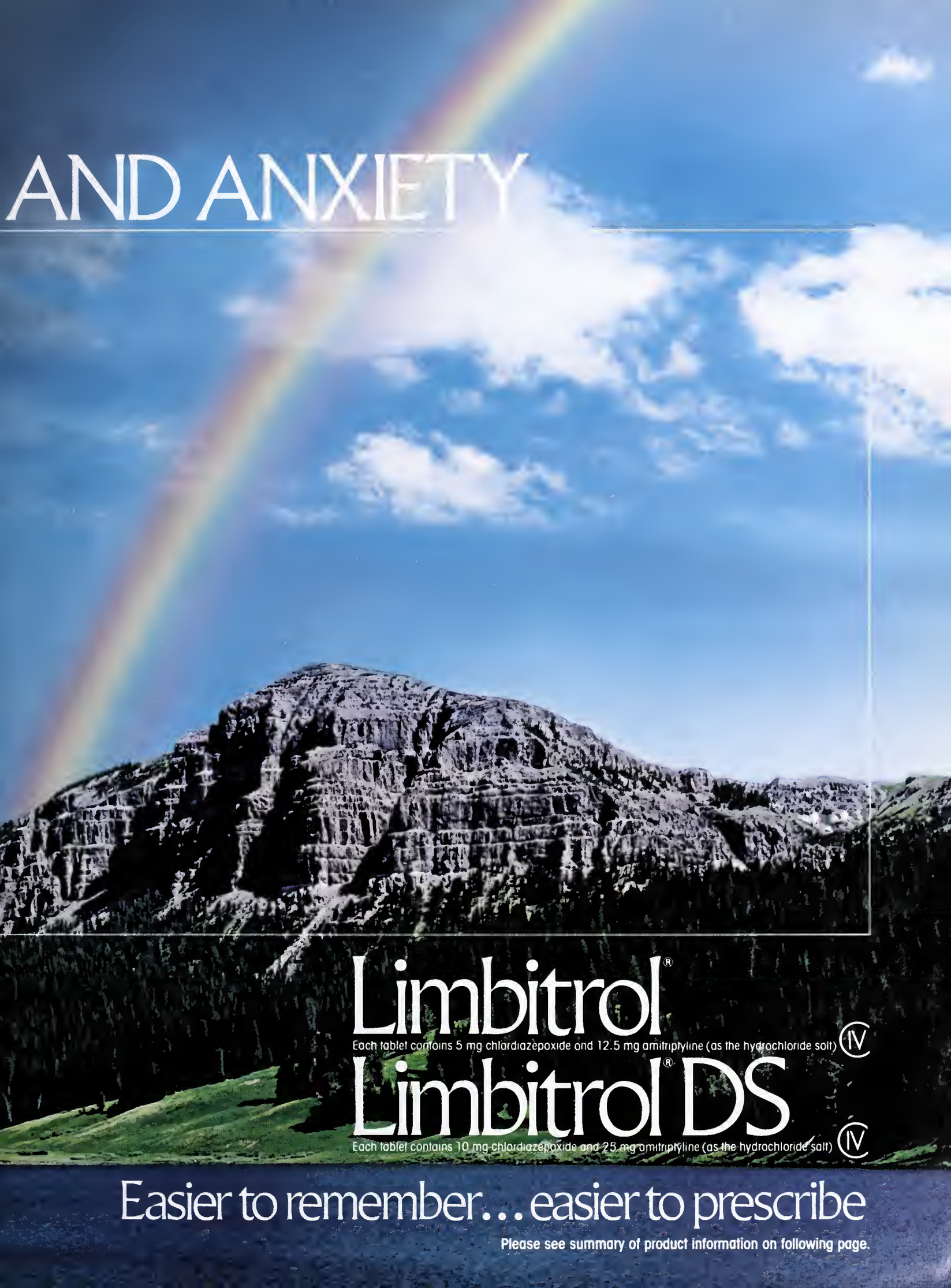
Osteoporosis Among Hawaii Japanese: A Review of the Major Findings of The Kuakini Osteoporosis Study 309
Richard Wasnich, MD, and J.M. Vogel, MD

References and Extramural Bibliographic Sources 314

Continuing Medical Education 326



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Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male; breast enlargement, galactorrhea and minor menstrual irregularities in the female; elevation and lowering of blood sugar levels; and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
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Editorials

The 100th, 85th, and 40th

This issue of the JOURNAL is a special one. It honors the *Kanyaku Imin* — the Japanese men and women who came from their homeland to serve as laborers under contract on the sugar plantations of Hawaii. This had required the signed approval of King Kalakaua and of Emperor Meiji of Japan.

The first boatload of laborers arrived on Feb. 8, 1885, on the SS City of Tokio. Thus, the celebration of the 100th anniversary of the coming of the contract laborers.

The *Issei, Nisei, Sansei,* and now the *Yonsei* — four generations of immigrants and their descendants — have contributed immensely to the cultural growth of the Islands while Hawaii was a kingdom, a U.S. territory, and now that it is the 50th state of the United States of America.

As a medical journal, the JOURNAL wishes to honor, in particular, the physicians and scientists of Hawaii who have emerged from this in-migration from the Orient. Their names are legion.

We are reminded by Reizo Watanabe, editor-in-chief of the newspaper Hawaii Hochi, that the first recognized Japanese physician came to Hawaii as a contract laborer in the first contingent. He had received his training at the Tokyo Medical School, but his need and desire impelled him to come to Hawaii by hiding the fact of his education. However, he was recognized by the resident Imperial Japanese Consul, and by special arrangement with the Maui plantation manager, the doctor was "pulled from the ranks" and given his proper status. He was licensed to practice as a physician Nov. 26, 1887. His name is Kosai Yoshida.

Even so, Yoshida does not have the distinction of being the first practicing Japanese physician in Hawaii. That honor belongs to Keizo Kimishima, MD, who was licensed on May 5, 1886, and hung out his shingle in Koloa, Kauai.

Of the many physicians of Japanese ancestry who are just as eligible for prominence in these pages, we and the special editors of this issue have chosen Seiichi Miyasaki, MD, of Haleiwa, Oahu, an octogenarian *Nisei* still in active practice, to represent through his biography a large part of the past 100 years of medical practice in the Islands.

The Hawaii Medical Association also wishes to honor on its 85th anniversary the Kuakini Medical Center, which originally was known as The Japanese Charity Hospital. The scientific articles in this issue give testimony to the quantity and quality of the work done under its many roofs. The JOURNAL is proud to honor its many contributions to our society.

Finally, this year, this month, is the 40th anniversary of the ending of the last "great war"; that event also signaled the beginning of a new era for mankind the world over.

The dropping of the atomic bombs on the sixth and the ninth of August 1945, on Hiroshima and Nagasaki, in that order, has had a tremendous impact on medicine as it relates to the public health.

We now know that any future general war in which the assembled huge overkill arsenals of nuclear weapons may be used by one or both of the two "superpowers" might well bring about the "final epidemic," after which the physicians of the world will find themselves totally inadequate to do any "healing" — if there are any people anywhere left to be healed and if any physicians survive.

Let us hope that in celebrating these anniversaries, the memories of the 100th and of the 85th will live on in the minds and hearts of the future generations; and that the memory of the 40th anniversary will dim as the potential of its impact can and will be reversed.

We would like to thank Michael Okihiro for initiating the idea of this special issue; Henry Yokoyama, chairman of the HMA Publications Committee, for pushing the idea along; and Grant Stemmermann for being the catalyst, as guest editor.

J.I. Frederick Reppun, MD
Editor

'Confounders'

The heart of this issue of the JOURNAL is dedicated to the *Kanyaku Imin* and to the medical research done at Kuakini Medical Center, the hospital that was born 85 years ago as the Japanese Charity Hospital. It was founded with the intent of caring for the *Issei* — the generation of contract laborers from Japan that began to arrive in these Islands 100 years ago.

The heart of the heart, one might say, was the Honolulu Heart Study on a cohort of 8,006 Japanese men derived from that immigration and resultant progeny — a cohort that has held together with remarkable fidelity to the cause of medical science and the search for facts.

The study of CHD, or coronary heart disease, figures prominently in these articles, as the search for incidence, prevalence and mortality was continued over 20 years, in terms of how living in Hawaii, living in Japan, and living in California relates to these.

Interestingly, JAMA of April 12, 1985, Col. 253, No. 14, page 2,094 contains an editorial: "A Perspective on CHD and Cholesterol."

"The pragmatic clinical approach," says JAMA editor S.H. Rahimtoola, MD, "could be summarized as follows: (1) CHD is more common in the U.S.A. than in some countries (Japan, e.g.). (2) Our diet is richer in certain fatty constituents and in cholesterol. . . . (3) High blood cholesterol levels are associated with high risk of CHD. (4) Reduction of very high blood cholesterol levels reduces atherosclerosis and CHD. (5) *Most importantly,* reducing fat and cholesterol intake by reasonable amounts is not known to be associated with any risk and is unlikely to do any harm. (6) Therefore, it is reasonable to recommend appropriate changes in diet."

This conclusion — that a proper diet will reduce the incidence and prevalence of CHD — based on the results of the Lipid Research Clinic Coronary Primary Prevention Trial in 1984, is said to be flawed, however, because a proper diet study was not done (because it would cost too much).

Is not this an example of the "confounders" confounding — causing confusion in — the results?

Wasnich, Vogel, Yano and Ross, in their paper "Osteoporosis Among Hawaii Japanese: A review of the major findings of the Kuakini Osteoporosis Study," placed at the heart of this JOURNAL, use this interesting term, which is a colloquial word peculiar to research, no doubt.

J.I. Frederick Reppun, MD
Editor

A Great Idea

On Feb. 8, 1885, the first boatload of government contract laborers from Japan, the *Kanyaku Imin,* came to Hawaii to toil on the sugar plantations. Over the ensuing years, many others followed suit, so that by 1924, when the Japanese Exclusion Act, passed by the U.S. Congress, stopped further immigration, more than 200,000 Japanese already had come to Hawaii.

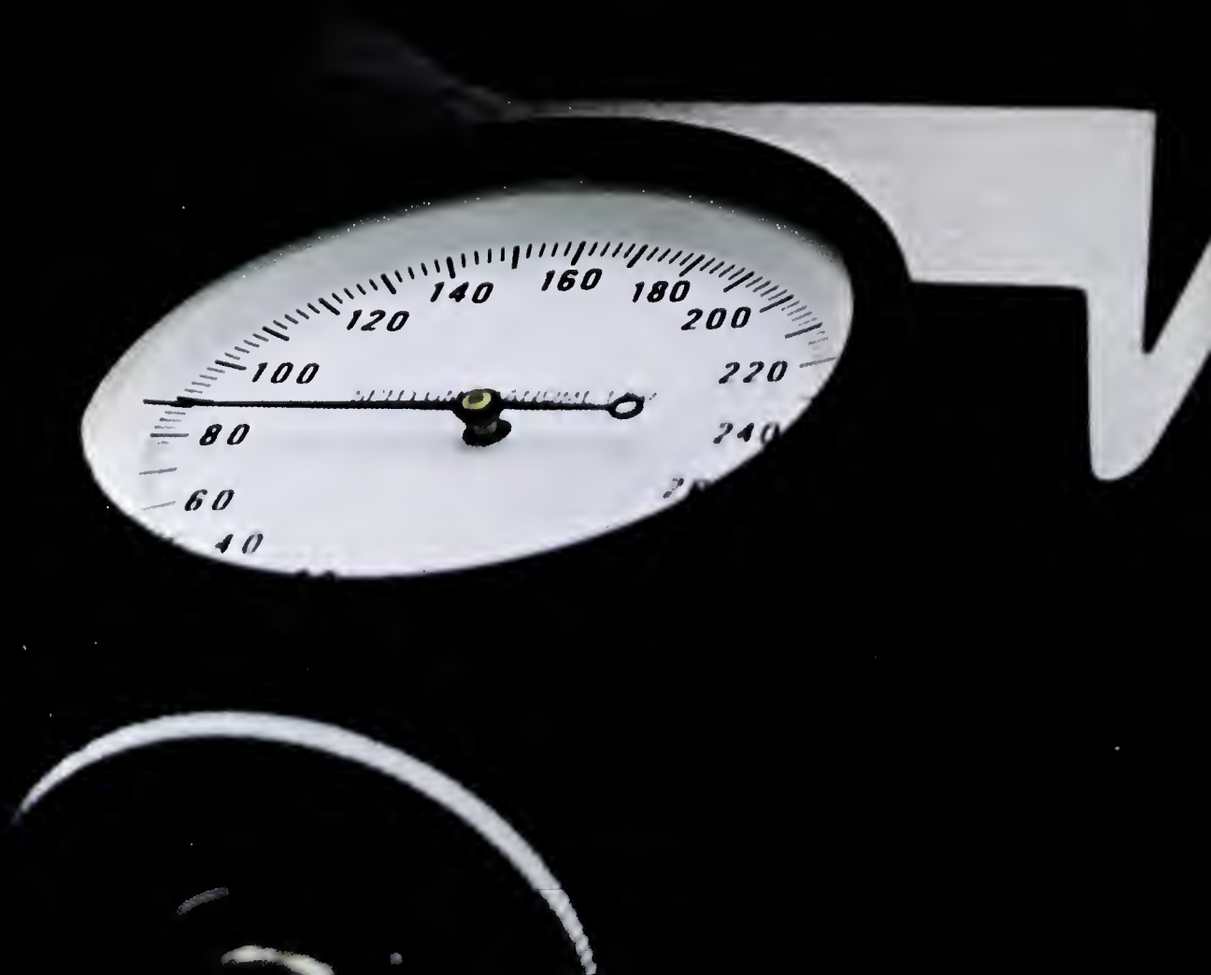
Most of them had planned to work hard, save their money and return to Japan as wealthy men, but relatively few had their dreams fulfilled. Most of them remained, and today they make up about a fourth of Hawaii's population.

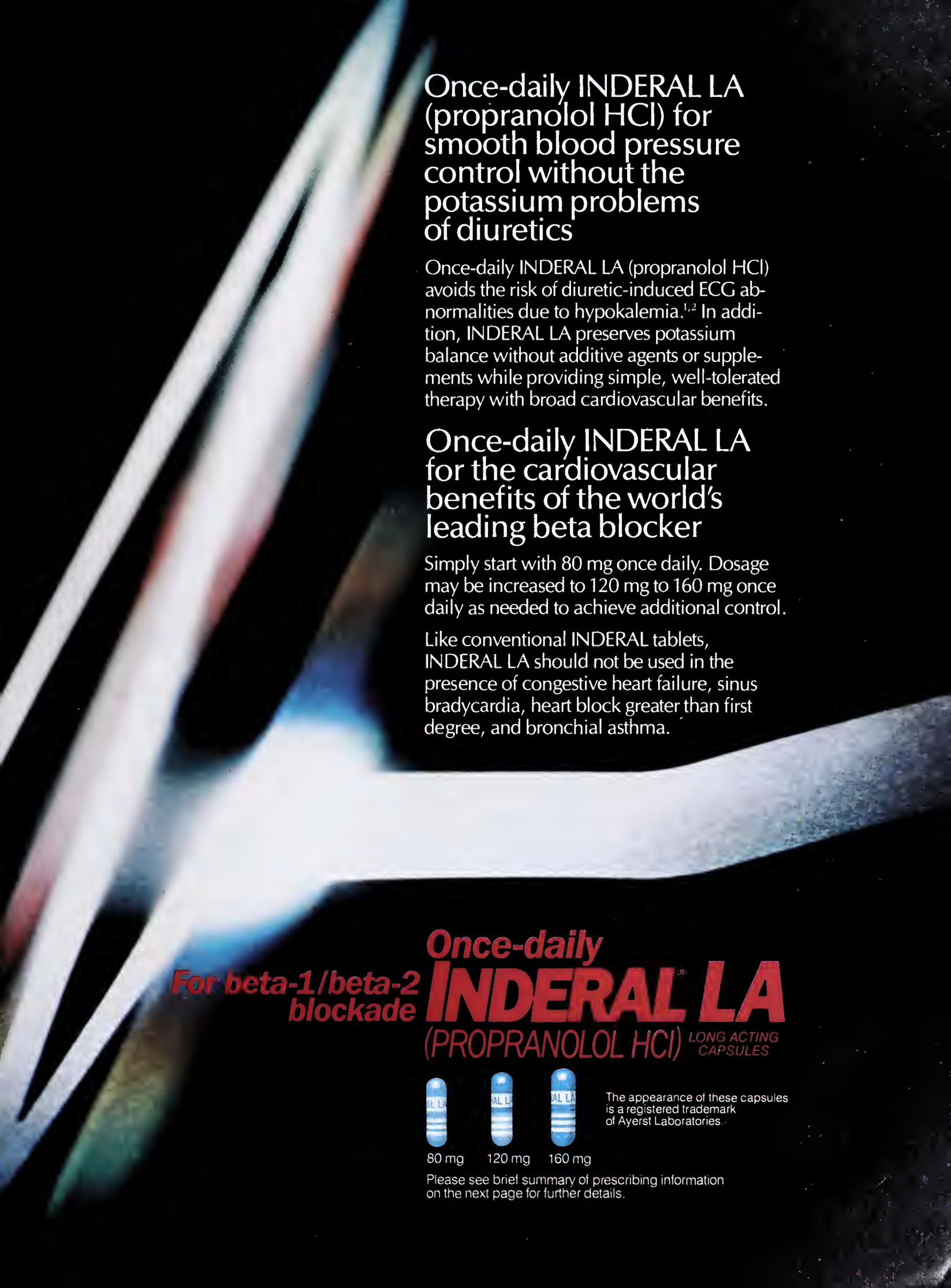
To commemorate the 100th anniversary of the *Kanyaku Imin,* the Japanese community has been putting together various events, headed by the Governor's Coordinating Council and the Oahu Kanyaku Imin Centennial Committee. Along this line, we thought it would be worthwhile to publish an issue of the HAWAII MEDICAL JOURNAL dedicated to the medical problems of the Japanese in Hawaii.

Kuakini Medical Center had its humble beginning at the turn of the century as a haven for sick Japanese; it was, in fact, known as the Japanese Hospital up until

(Continued on page 281)

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The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy. Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness, mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299.

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(Continued from page 277)

World War II. Since the health of the Japanese has been so closely associated with Kuakini, a short history of the center seems appropriate for this issue.

Since 1960, KMC has housed various types of research projects. Results of these studies have been documented in more than 200 scientific articles published in various journals. Dr. Grant Stemmermann, chief of pathology emeritus at KMC, has been the driving force behind many of these studies and has asked the primary researchers to write a series of summary articles on the kinds of research that has been conducted at KMC over the past 25 years. This special issue of the JOURNAL also will serve as a bibliography of the many publications that have resulted from these endeavors.

Michael Okihiro, MD

The Impact on Health

This issue of the JOURNAL contains articles that commemorate the 100th anniversary of the start of Japanese immigration to Hawaii.

It is appropriate that the articles should describe the changes in patterns of disease that have occurred among Japanese after they had lived in Hawaii for many years. These changes have been documented, described and explained by the Honolulu Heart Program, the Japan-Hawaii Cancer Study and the Kuakini Osteoporosis Study.

These unique long-term prospective studies are now celebrating their 20th anniversary. They have been based at the Kuakini Medical Center because it served as the immigrants' hospital, as is made clear by the capsulized history of the institution included in this issue. The scientific articles compress the findings of many reports into a small space. They can only highlight the most important findings. Those readers whose sophistication or curiosity demand greater detail in methodology, analysis or explanation are referred to the original references given in the bibliography.

Space limitations do not permit the inclusion of several cancer studies, some of considerable significance. Among these are Fukunaga's studies of the geographic distribution of occult thyroid cancer in Japan, North America, Hawaii, Europe and South America;[22, 34] Nomura's identification of the close association of hepatoma with hepatitis B infection;[146] and Akazaki's comparison of prostate cancer among Japanese in Japan and Hawaii.[14] None of these studies could have been completed without the cooperation of the men in the original Honolulu Heart Program cohort. These men have made a considerable contribution to the health of their community and of their descendants.

They have helped to make this study one of two or three in the world that have followed a large, defined population long enough to estimate the level of risk imposed by many epidemiologic variables upon our most common diseases. Heart disease, cancer and stroke are the three most common diseases in this population; osteoporosis is one of the commonest causes of hospitalization.

We also are fortunate in having data on healthy subjects. Attention is especially directed to Reed's article describing the attributes of those men who escaped serious illness in the first years of the study. These men probably have much to teach us.

In order to conserve space, a common bibliography is used.

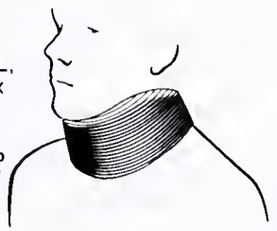
Extramural publications that have served as the basis of the Kuakini studies are listed in a bibliographic appendix, with the reference number preceded by the letter A. Citations in both bibliographies are listed chronologically.

Acknowledgments

The Honolulu Heart Program (HHP) is supported by Contract No. N01-HV-02901. The Japan-Hawaii Cancer Study (JHCS) is supported by Grant No. R01-CA-33644. The Kuakini Osteoporosis Study is supported by Grant No. R01-AG-02483.

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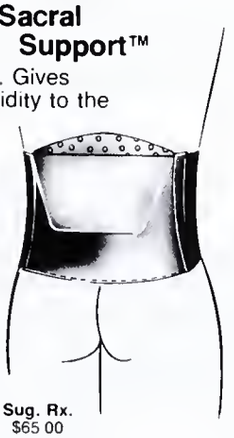
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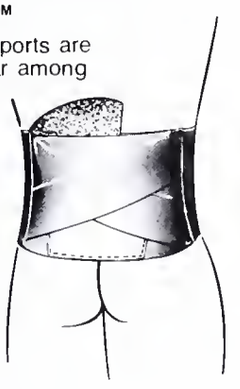
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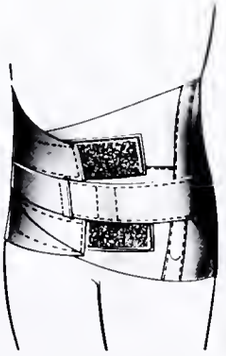
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The authors of the articles herein wish to thank the following institutions for their cooperation in maintaining surveillance of mortality and morbidity in the HHP cohort: Castle Memorial Hospital, Kaiser Medical Center, Leahi Hospital, Queen's Medical Center, St. Francis Hospital, Straub Clinic and Hospital, Tripler Army Medical Center, Wahiawa General Hospital, the Hawaii Tumor Registry, and the Medical Examiner of the City and County of Honolulu.

We also wish to thank the Oahu Kanyaku Imin Centennial Celebration Committee for its generous contribution toward the publication of this dedication issue.

Grant Stemmermann, MD
Guest Editor
HMJ Commemorative Issue

Hawaii Academy of Family Physicians' Newsletter

Don and Marlies Farrell

Membership News

We welcome Dr. Jeffry A. Smith as a new active member. He has transferred here from California and is the district health services administrator for the state Health Department in Lihue . . . Drs. Ben Azman and Jennifer Frank have been re-elected to active membership after having completed at least 150 hours of Academy-approved CME . . . we bid *aloha* to Dr. Mark Wentworth, who has moved to Austin, Texas. Congratulations to the new parents among our members: Bill and Kathy Ahuna welcomed a new little boy, their fourth child; and Lloyd and Sharon Kobayashi have a new baby girl, their third child.

Council News

President Bernard Chun appointed the following committee chairmen: Public Health & Scientific Affairs — Lincoln Luke; Health Care Services — Lloyd Kobayashi; Education — John Aoki; Legislation & Government Affairs — Bernard Chun; Research — Ken Steinweg; Public Relations — Bob Hollison; Membership & Membership Services — Lily Ning; Minority Health Affairs — Nathan Wong; Hospitals — Howman Lam; Mental Health — Jennifer Frank; and Bylaws — Fred Reppun.

In order to foster closer ties with Neighbor Island members, the council recently voted to fund a councilmember's visit to a Neighbor Island quarterly. President Chun was to visit Kauai during July. The council also has had a special planning meeting to review the priorities set at the 1983 Makaha meeting and to reactivate some of the projects initiated there.

(Continued on page 288)

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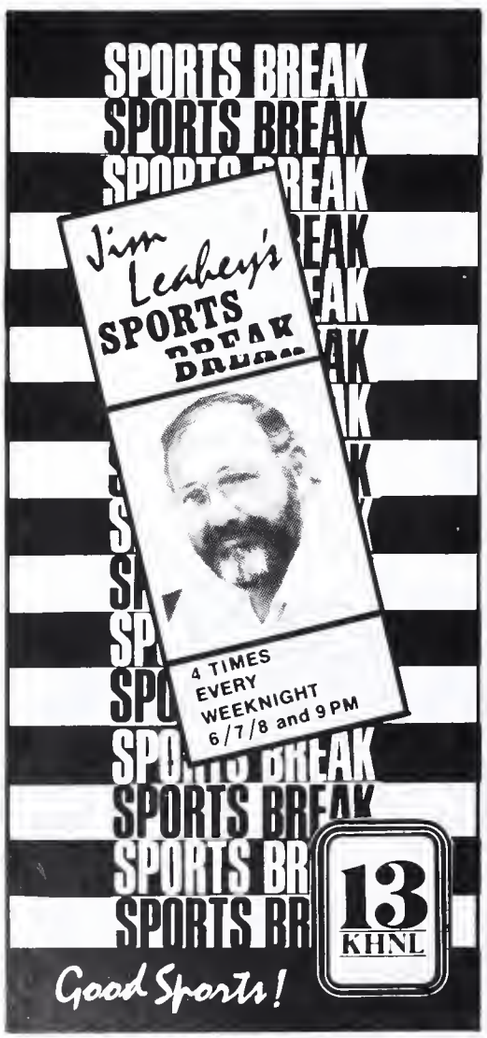
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Seiichi Miyasaki, MD

It seems appropriate, on the occasion of the 100th anniversary of the arrival of the Japanese immigrants to the Islands, the first increment coming to Hawaii to work on the sugar plantations, that a Nisei *physician, born on a plantation, of parents who came here in one of the early "waves," should be honored by the Hawaii Medical Association by having his biography published in this special issue of the JOURNAL.*

Dr. Miyasaki is one of many Nisei *physicians and does not want to be singled out for an honor. However, not only is he a 50-year member of the Hawaii Medical Association, but he also was honored early last year by the Hawaii Academy of Family Physicians for serving as family physician to his patients for more than 52 years.*

Seiichi Miyasaki, MD has practiced general and family medicine in Haleiwa, Oahu, together with his wife, Chyeko, who is his nurse and receptionist. They still care for patients on an on-call basis at 66-214 Haleiwa Rd. in a neat "new" office overlooking Haleiwa Beach Park and the blue ocean waters off Haleiwa Bay. Their home is adjacent.


Dr. Miyasaki

Dr. Miyasaki was born Dec. 18, 1903, which means that he is into his 82nd year. He was born in a Waialua Sugar Plantation village known as "Pump 2," long since eradicated without a trace. His father, Kumazo, was the plantation's supervisor of carpentry. He was born in Japan and came to Hawaii in 1898 with his wife, the former Yoshino Kuwabara.

Dr. Miyasaki was taken by his parents to Japan when he was three. His father returned shortly afterward to Waialua Plantation, but his mother and the children remained in Japan. His two older siblings died in childhood, but a younger sister was born in Japan and continues to reside there.

In 1913, he and his mother returned to Hawaii, but they were destined not to come at the same time. Immigration and health restrictions were strictly enforced in those days. Dr. Miyasaki, of course, was born an American citizen, but there were no papers to prove it. However, he got clearance first and came to Hawaii with a guardian, as a Japanese National; his mother succeeded in coming later. Neither of them knew any English.

It was not until 1927, when it came time for him to go to the Mainland to school, that he succeeded in establishing his American citizenship with the help of witnesses to his birth in Waialua.

Dr. Miyasaki attended what is now known as Mid-Pacific Institute as a boarding student and graduated in 1924. While there, he excelled in tennis and was the team captain. He matriculated at the University of Hawaii, class of '28, but was accepted at the University of North Dakota two-year medical school after three years at UH.

At considerable sacrifice, his sugar plantation family helped him to get there and on to Northwestern School of Medicine, from which he graduated in 1931.

As was the custom then and there, he did not receive the MD degree until he had interned for a year at Illinois Masonic hospital. He then served a year at Milwaukee Children's and 8 months at Willard Parker Communicable Disease Hospital, from 1933 to 1934.

He remarked that he was well accepted in the Midwest, despite being a strange, Oriental curiosity.

He remembers others from Hawaii studying at about the same time at North Dakota and at Northwestern, namely Frank Hatlelid (later at Waialua Plantation Hospital), Kodama, Saiki and Edwin Chun-Hoon.

Dr. Miyasaki opened his office, not far from the current one, in Haleiwa in 1935, for solo general practice, surgery and obstetrics. There was an elderly Dr. Yamamoto in Haleiwa at the time, but he soon left; so Dr. Miyasaki was truly "solo." The only hospital available to him was the Waialua Plantation Hospital. Arthur L. Davis, MD, the father of singer Charles K.L. Davis, was in charge and took Dr. Miyasaki under his wing. In 1942, a school in Wahiawa was converted into a hospital, which is the antecedent of the present modern Wahiawa General Hospital. He practiced surgery and obstetrics there with Timothy Wee, MD after the Waialua hospital closed down.

In 1960, Dr. Miyasaki quit doing surgery and OB, concentrating on office practice. He had delivered babies of mothers whom he had also delivered. Always practicing solo, he has been his natal community's physician for 50 years, covering an area with a radius of 10 miles.

In those early days, the road to Wahiawa was all dirt. Coming home one rainy night, his car slid into a ditch and he found himself scrambling up the steep bank and saw his doctor's bag floating away down the swollen muddy stream.

Dr. Miyasaki became a member of HCMS, HMA and AMA before World War II; not infrequently, he traveled all the way into Honolulu to attend meetings and seminars. However, in the last six years he has not ventured outside of Haleiwa. He is a charter member of Hawaii Academy of General Practice (now Ha-

(Continued on page 286)



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(Continued from page 284)

waii Academy of Family Physicians) — since September 1951 — and is certified by ABFP as a family physician.

He married the former Chyeko Uyeda in 1947. They have four children: Mrs. Shirley Kitamura, a teacher; Jennie, a staff person at the East-West Center; Robert, the supervisor at Pioneer Construction in Wahiawa; and Neal, a physician in internal medicine in San Francisco. They have two grandchildren, ages 10 and 7.

Dr. Miyasaki has been a member and a vice president of the Waialua Lions Club since 1947. He has also been active with the Waialua Community Association, but his main interest — his only "hobby" — has been the Haleiwa Jodo Mission (Buddhist) which his father helped to found. The day after Pearl Harbor, its co-founder and minister, the Rev. Buntetsu Miyamoto, was summarily seized by the Military Police and taken away from the bosom of his family, and incarcerated; later he was interned on the Mainland for five years.

Dr. Miyasaki, with fear and trepidation not only for his own personal safety in those irrational times but also for the safety and protection of the reverend's wife and small children and for the mission itself, took upon himself the role of guardian for the duration. The church was boarded up, the school occupied by the military, the "Image" removed to safekeeping elsewhere.

As the war came to a close, very strong pressure by powerful interests was put upon Dr. Miyasaki to sell or lease the valuable property, but he kept his trust and preserved the mission until the Rev. Miyamoto was released and returned from exile.

What would he say to a young person entering medicine today? "It is a good profession despite current difficulties. I would advise the young person to begin with general/family practice in order to develop a broad base of knowledge and experience, then maybe specialize later if so inclined. My son chose to go into medicine without my pushing him. I have no regrets."

Despite living and going to school in Japan during his early learning years and despite knowing no English on his return to Hawaii at age 10, he is as fluent in English as those of us who know no other language. In fact, he admits, ashamedly, that he is very rusty in Japanese: "But I know enough so my elderly Japanese patients feel comfortable in coming to their old *sensei.*"

Dr. Miyasaki has no plans to retire as long as he feels fit mentally and physically — which he certainly seems to be — as long as his faithful patients want his services.

J.I. Frederick Reppun, MD

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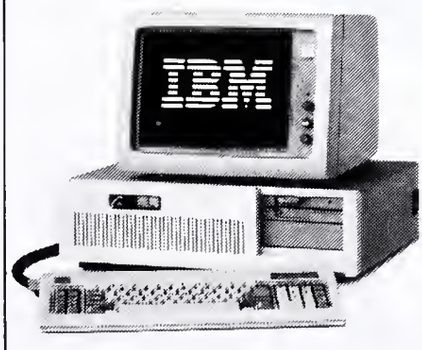
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(Continued from page 282)

Dr. Chun and Marlies Farrell attended the State Officers' Conference in Kansas City in late April and found it to be a very worthwhile experience. The Academy, on the national level, is very much aware of the concerns and difficulties facing FPs today and is working to address issues such as the malpractice crunch, privilege problems and reimbursement.

Obviously, there are no easy answers to any of these problems but solutions are being sought at the highest levels of the national organization. We are not alone!

CME News

Core Content Review will begin its 1985 Home Study Program shortly. It is an excellent program and those studying for board recertification should find it very helpful.

The AAFP Annual Meeting will be conducted in Anaheim, Calif., in October. The schedule has been changed to incorporate the weekend in the scientific portion so members may attend the entire program while taking a minimum of time away from their practice. It offers top-flight CME as well as interesting social and family events. We hope to see many of you there.

Remember, Don Farrell and John Aoki are Hawaii's delegates to the AAFP Congress. Call them with your concerns! If you can, do attend the congress yourself and see the Academy at work. Your participation is sought and appreciated. Register early!

Our own program committee is hard at work planning the HAFP Annual Meeting and Seminar 1986, set for Feb. 22 and 23 at the Hilton Hawaiian Village. In 1987, it will be "Hawaii Review '87," our joint meeting with the British Columbia family physicians. You will be hearing more about all of these in the near future.

Of Special Interest

The March of Dimes is sponsoring a unique program that will vastly improve screening for high-risk teens. Developed by Dr. David Paperny, the CONFIDENTIAL TEEN HEALTH ADVISOR is a computer-assisted method of screening adolescents. Teens find it easy and nonthreatening to talk to a computer about sensitive problems. This process has been shown to be more reliable and valid than questionnaires or direct interviews.

Screening will be carried out at various locations. It began at the Youth Health Fair at Ala Moana Center, June 22 and 23.

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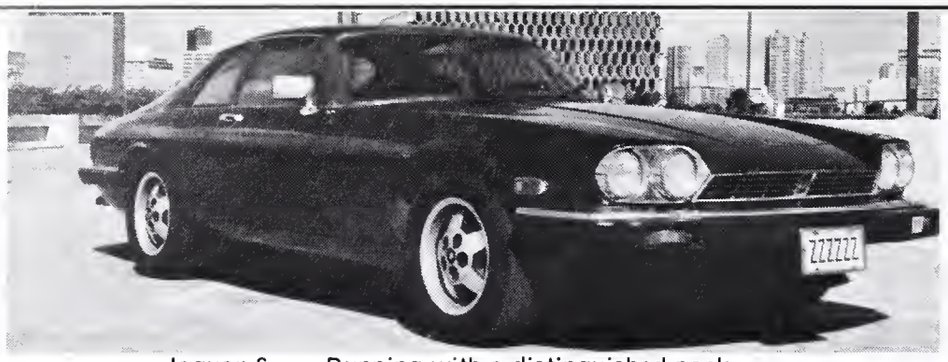
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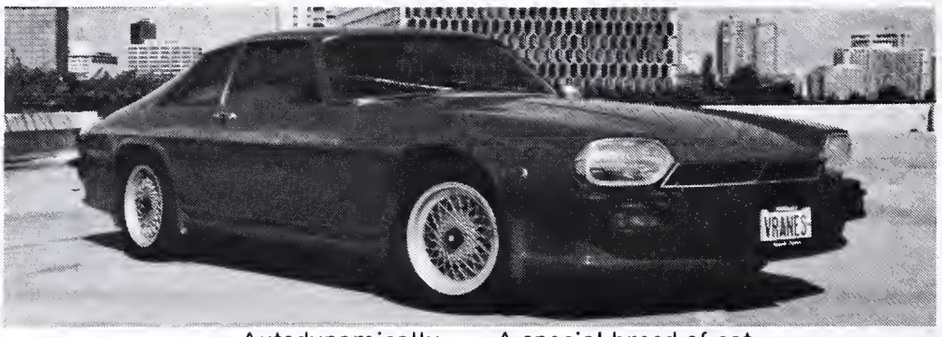
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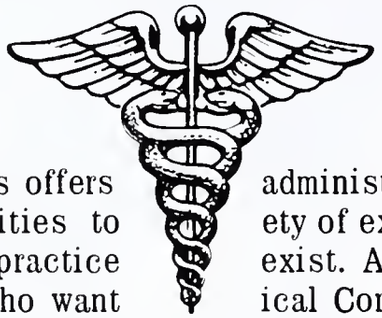
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The Immigrants' Hospital: Kuakini Medical Center

Masaichi Tasaka, president, Kuakini Health System, and
Richard Suehiro, vice president, Kuakini Health System

The Kuakini Medical Center has served the Japanese community in Honolulu since the beginning of the 20th century. In the late 1800s, the sugar plantations in Hawaii were booming, and contract laborers were the backbone of the industry. Between 1885 and 1900, more than 70,000 Japanese immigrants crossed the Pacific Ocean to Honolulu to work in the cane fields. Low wages and unexpected expenses soon placed many of the newcomers in circumstances of indebtedness.

The Japanese Benevolent Society, led by the Reverend Take Okumura of the Honolulu Japanese Christian Church, banded together to "Engage in the relief of those Japanese who are overtaken by unforeseen mishaps, or those who are not able to provide medical care for themselves at their own expense." This group survived over the years to become the forerunner of Kuakini Medical Center.

Chartered on Oct. 30, 1899, this society operated from quarters in the Kapalama district in Honolulu. After 3,500 Japanese immigrants were left homeless following the outbreak of the bubonic plague and the Chinatown fire, the society decided to build a hospital in a two-story wooden structure. Completed in 1900 in the Kapalama district, it contained 38 beds and was called the Japanese Charity Hospital. The first medical director was Dr. Iga Mori, the dean of the early Japanese physicians and surgeons.

Growth and Development

1910-1919. As the influx of Japanese immigrants increased to more than 100,000, the need for expansion became evident. The first expansion took place in 1901, when the hospital was moved to a two-story building on Liliha Street.

The further growth of the Japanese population mandated the availability of more medical services and further growth of the Japanese Charity Hospital. In 1911, four acres of land were acquired on Kuakini Street for new and larger facilities. Construction of a 16-building complex was completed in September 1918 that was named The Japanese Hospital. (See Figure 1.)

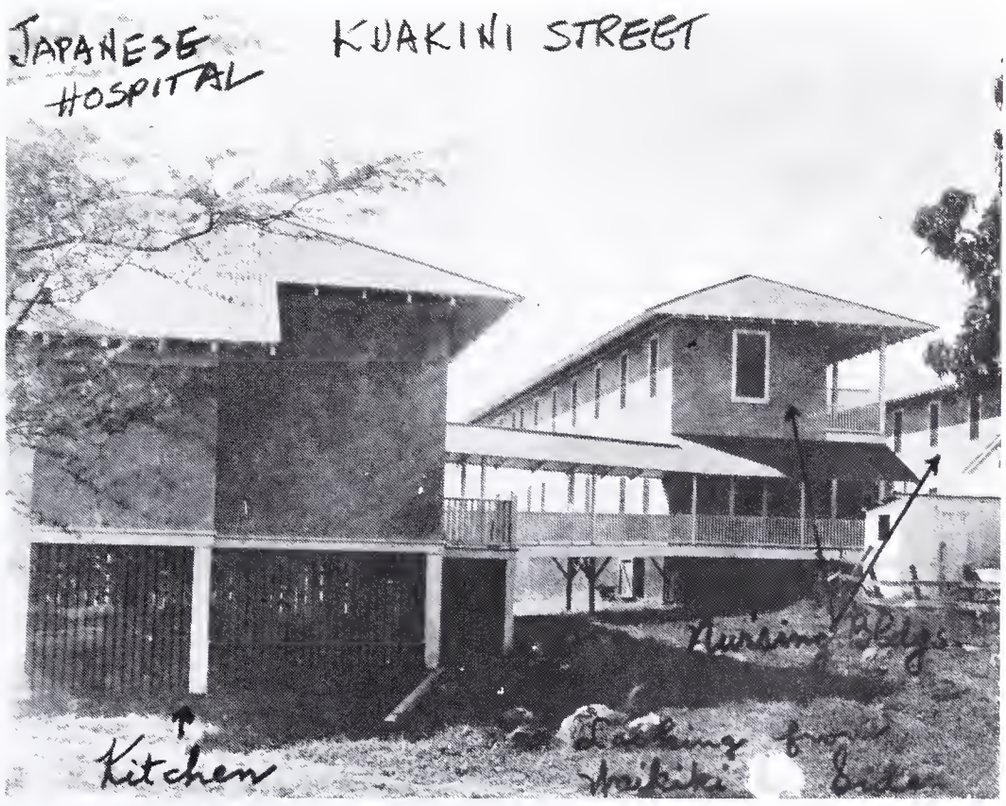


FIGURE 1.
The Japanese Hospital, 1917

Accepted for publication June 1985

1920-1929. The Japanese Hospital continued to grow and the original five-member Honolulu Japanese Medical Society grew to 15 members. With the passage of the Immigration Act of 1924, the flow of doctors born and trained in Japan stopped.

By 1939, only six or seven of the original physicians remained in the society. Thus, the 70-bed facility on Kuakini Street was the crucible from which *Nisei,* or second-generation Japanese, physicians came to the positions of prominence they enjoy today.

Between 1925 and 1931, the need to care for the elderly unmarried *Issei,* or first-generation Japanese, men and the need of public support upon retirement were recognized. To fulfill this need, a small wooden cottage was provided by the hospital in 1927 to house 15 to 20 men.

1930-1939. In 1931, Hego Fuchino, a locally trained engineer, designed a three-building complex to house an average of 40 elderly men. The Japanese Old Men's Home has provided a home for the dependent elderly men for more than 50 years since then.

The board of directors of the hospital authorized an expansive building program in 1938. The $195,000 modernization program provided a modern facility with the latest medical equipment and technology. The focus of the expansion was the Royal Memorial Building, partially funded by a gift from the emperor and empress of Japan. The two-story, fireproof building was built of reinforced steel and concrete and was decorated by a facade reminiscent of Imperial Japan. As a tribute to the Japanese government, a distinctive dome was placed atop the new building. The radiology department, with the newest X-ray equipment, occupied the first floor while three new operating rooms were situated on the second floor.

A second three-story concrete building housed maternity, pediatric and laboratory facilities. Other elements of the modernization design included renovations to the nurses' quarters, staff housing and other older buildings. In 1939, the 40th year of operation, the hospital had 100 beds and the staff included 52 nurses, two resident physicians and 40 physicians of the attending staff. All of the doctors were members of the Honolulu Japanese Medical Society.

1940-1949. As the decade of the 1940s began, the hospital was organized and run in a traditional Japanese manner. Hospital records were kept in Japanese and the ability to read and write English was not required of the nurses who were trained at the on-site nursing school. (This school graduated its first class in 1929 and its last class in 1955.)

A distinctive family style of care was practiced, with relatives taking care of patients' personal needs, often sleeping in the rooms. Nurses did not carry bedpans but were trained to "serve" the doctors, carrying out orders without question. During this period, the hospital operation was more doctor-centered than patient-centered.

Although the hospital was open to all, it was for the most part a Japanese hospital serving the *Issei* and their families. This situation changed as a result of the attack on Pearl Harbor. After the attack, the hospital's board of directors offered a portion of the patient facilities and the nurses' dormitory to the U.S. Army Medical Corps. The Army took over administrative control in 1942 and at the same time the board of directors dropped the Japanese Hospital name, replacing it with "Kuakini Hospital and Home."

The Americanization of the Kuakini Hospital and Home took place gradually. The "older" administrators were replaced with younger *Nisei* hospital administrators. Masaji Marumoto (1941-1943) and Kenji Goto (1948-1969) were recognized for their outstanding contributions during the war and postwar years.

1950-1959. In 1948, the hospital had 6,000 admissions and more than 200 affiliated physicians. The transition to American medical and nursing practice was well in place and in 1949, a quiet 50th anniversary was celebrated. Four years later, in 1952, the first major construction since 1939 was completed. The fund drive in 1951 had successfully raised more than $340,000, and with an additional large federal grant, new buildings were constructed to house and improve maternity, surgical, laboratory and dietary facilities. Bed capacity was increased from 100 to 140.

By 1954, Kuakini Hospital received full accreditation from the Joint Commission on Accreditation of Hospitals. There were 235 employees, including 63 full-time nurses; 225 physicians were on the medical staff. By 1958, the American Medical Association accredited Kuakini's internship program. Kuakini was also designated by the U.S. State Department as eligible to have an exchange visitor program whereby foreign medical school graduates could receive their post-graduate medical training.

1960-1969. In 1965, a five-year expansion and modernization program was planned. Construction began in 1967 and was completed in 1969 on the current Makai Wing. When Kenji Goto retired as administrator in October 1969, the bed capacity had reached 208 beds, with a staff of 475.

During this same period, more physicians became specialists. Obstetricians and pediatricians preferred to care for their patients in specialty hospitals such as Kapiolani Maternity and Kauikeolani Children's.

As a result, the obstetric department was closed in 1964, followed by closure of the pediatrics department in 1967.

Makai Wing provided patient care nursing units, surgery, recovery and emergency rooms; laboratory, radiology, pharmacy; intensive and cardiac care units; occupational/physical therapy areas; and an auditorium and conference rooms.

1970-1979. Masaichi Tasaka succeeded Kenji Goto in January 1970. Construction of a new administration building was completed in the spring of 1971. The new building housed the library and the business, administration, medical education, medical records, central supplies, respiratory care, nursing office, admitting, personnel, purchasing, development, volunteer and medical social services offices.

Kuakini Hospital and Home was renamed Kuakini Medical Center (KMC) in September 1975 to commemorate its 75th anniversary. This was followed by a new building program, which was started and completed in increments between 1977 and 1980.

It included remodeling the ancillary facilities, such as the pharmacy and laboratory; a 750-car parking structure; an eight-story physicians' office building and a 10-story, 250-bed geriatric care facility called Hale Pulama Mau (House of Cherishing Care), an outcome of Kuakini's longstanding commitment to and concern for providing services for the elderly.

Hale Pulama Mau includes a 50-bed Skilled Nursing Facility, a 100-bed Intermediate Care Facility, 100 Residential Care Home beds for men and for women, a day-care center for 50 adults, an adult day health care program and a respite care program. (See Figure 2.)

Services

KMC has been able to provide quality patient care services through its excellent nursing staff and health care professionals. Also, its ancillary and support services are among the best in the State of Hawaii. In addition to the services and departments listed above, the following provide quality care — data processing, nuclear medicine, pulmonary medicine and radiology.

The data processing department has developed a comprehensive hospital information system on a mainframe computer that takes care of admissions/discharges/transfers, outpatient registration, general ledger, accounts receivable, accounts payable, automated billing, payroll with an automated time and attendance system, medical records abstract, DRG group and case-mix analyses, utilization review system, on-line order entry and result reporting for the nursing floors, nurse staffing based on patient census, surgery scheduling and reporting system, fundraising system, and on-line materials management.

Interfaced with the hospital information system is an on-line hospital phar-

macy system and a laboratory computer system. There are a number of stand-alone computer systems, including a retail pharmacy system and a plant maintenance system.

The laboratory department provides the services of anatomic pathology, blood bank processing, chemistry, clinical microscopy using an electron microscope, hematology, immunohematology, microbiology, parasitology, serology and virology. The services of the laboratory have been enhanced by the installation of a laboratory computer system that interfaces with major automated testing equipment.

In nuclear medicine, Kuakini has one of the most progressive and best-equipped departments in Hawaii, capable of providing sophisticated testing on a timely basis. Currently, the department has five gamma cameras interfaced with a computer analyzer and a Single Photon Emission Computer Tomography (SPECT) instrument. One of the more heavily utilized outpatient services is the thallium scan with treadmill.

Kuakini's pulmonary service provides respiratory services for inpatients, a diagnostic laboratory with bronchoscopy suite, a pulmonary function laboratory that utilizes a body box, and a sleep disorder center. The department also provides a pulmonary rehabilitation program — the first to be developed in the state to serve the community's needs.

The Radiology Department has an advanced full-body CT-scanner, ultrasound equipment and state-of-the-art computerized digital angiography equipment. The equipment makes possible not only angiographic studies but also cardiac catheterization on an inpatient basis. Kuakini is prepared to initiate angioplasty procedures, using this equipment.

Education Programs

The College of Health Sciences and Social Welfare at the University of Hawaii, including the schools of Medicine, Nursing, Public Health and Social Work; the College of Arts and Sciences, including the Department of Psychology; the College of Tropical Agriculture; the Department of Human Development; and the UH community college system all use the facilities of Kuakini Medical Center.

On any given day, one will find medical, nursing, public health, social work, psychology, human development and other allied health students learning and working with the center's staff and personnel. Regular continuing education programs for staff and professionals are an integral and ongoing activity at Kuakini, in order to assure quality of service through the upgrading of skills, knowledge and information.

Research Programs

Kuakini Medical Center's commitment to serving the community is a cornerstone for current research projects. Many of these projects have gained national and even international attention for their contribution to improvement of the quality of life for persons of all races.

The oldest major research project is the Honolulu Heart Program. This longitudinal study of disease patterns, which was begun in 1965 by the National Heart, Lung and Blood Institutes, involves a cohort of 8,006 men born between Jan. 1, 1900, and Dec. 1, 1919. The study will continue until June 1989.

The Japan-Hawaii Cancer Study, funded since 1971 by the National Cancer Institute, is an epidemiological study of cancer. The study includes 6,860 men of the Honolulu Heart Program. The study was expanded to include 2,589 brothers of the 6,860 men. Wives and sisters of the 6,860 men, numbering 1,806, have also been included in the study since 1971.

The Osteoporosis Study, funded by the National Institute on Aging in October 1980, is now in its fourth year and will continue until August 1986, studying bone mineral loss and non-violent fractures among Japanese men and women.

There is a concerted effort being applied to educate the public about how to prevent osteoporosis. Fractures stemming from this condition have reached epidemic proportions in the Hawaii Japanese population.

The Kuakini Gerontology Center's programs and services are geared toward the prevention of premature institutionalization by educating the community about the medical and social health issues of the aging, and by providing specialty clinics on incontinence and on geriatric psychiatry with emphasis on Alzheimer's disease. The project is supported by a four-year (1983-1987) grant from the Robert Wood Johnson Foundation.

In keeping with its mission to provide quality medical care with advanced medical technology and highly trained professionals, Kuakini Medical Center is now the first and only medical center to affiliate with the Hospital Satellite Network (HSN), a national satellite television network. Through HSN programming, physicians, nurses, allied health professionals and hospital managers will be better informed and will enhance the quality of patient care for the citizenry of the State of Hawaii.



FIGURE 2.
Kuakini Medical Center, 1985, Aerial View

The Origins of Epidemiologic Studies of Heart Disease, Cancer and Osteoporosis Among Hawaii Japanese

Lance K. Heilbrun, PhD, Abraham Kagan, MD,
Abraham Nomura, MD, Richard D. Wasnich, MD

Parallel observations that both heart disease and cancer rates changed as indigenous Japanese migrated from Japan to Hawaii provided impetus for conducting epidemiologic studies in the migrant Japanese population in Hawaii. During the 1960s and early 1970s, Kuakini Medical Center became the research headquarters for both the Honolulu Heart Program (HHP) and later the Japan-Hawaii Cancer Study (JHCS). Both studies are still following the same cohort of 8,006 Japanese-American men, born from 1900 to 1919, who were living on Oahu in 1965, the HHP for heart disease and stroke events and the JHCS for cancer events.

Some members of the original cohort have returned up to five times for additional interviews and examinations. HHP and JHCS share a comprehensive hospital surveillance system for case-finding. After 20 years of follow-up, both studies continue to monitor this cohort of very cooperative subjects, now from 65 to 85 years of age. Since early 1980 the Kuakini Osteoporosis Study (KOS) has been following a subset of 1,368 HHP/JHCS men and 1,098 of their wives for changes in bone mineral content and for fracture events.

Using data from the early 1950s, Gordon[A2] observed that the United States and Japan had similar mortality rates for men. However, coronary heart disease (CHD) mortality was higher and stroke mortality was much lower among American males than among men in Japan. Other studies[A3, A7, A8, A12] found that the Japanese migrants to Hawaii and California had a lower mortality rate than either native Japanese or native Americans. The CHD and stroke mortality in these Japanese migrants was somewhere in between that of white Americans and native Japanese.

These changes in the disease experience of the migrant Japanese provided an exceptional opportunity to identify factors related to the causes of CHD and stroke. Prospective, or "cohort," studies of chronic disease generally require variability in exposures of interest (e.g., dietary patterns) among study subjects in order to find associated differences in disease risk.

Migrants usually experience more variability in their exposure to different factors than do non-migrants. Therefore, the likelihood is greater that factors related to disease will be identified in migrant studies, especially for diseases which are changing in occurrence.

The rise in the rate of CHD among the Japanese in Hawaii was of particular interest to many researchers. In response to this problem, a "tripartite" investigation was begun. This involved epidemiologic cohort studies in Hiroshima/Nagasaki, in Honolulu, and in San Francisco. This collaborative investigation has been referred to as the NI-HON-SAN study, named for its components: NIppon (Japan), HONolulu, and SAN Francisco.[8]

The U.S. National Heart, Lung and Blood Institute (NHLBI) established the Honolulu Heart Study (renamed Honolulu Heart Program in 1981) at Kuakini Hospital in 1964. One of us (A.K.) was recruited from the Framingham Heart Study in Massachusetts, and served as the first HHP director from 1964 to 1980.

The Honolulu Heart Program

The HHP planned to locate and examine all non-institutionalized men of Japanese ancestry living on Oahu, and born from 1900 through 1919. Identifying a large target population, such as this, might have been accomplished by using the 1960 U.S. Census Bureau data. However, the low response rate in an unrelated study,[A12] plus the cost, argued for a different approach. Since the Oahu Japanese-American population had been very stable after 1924, the World War II Selective Service Registration file was considered.[7] A pilot study of about 100 subjects suggested that about 85% of eligible Oahu men could be located using this roster.

After federal approval was secured, manual inspection of the approximately 165,000 registration cards took place during 1964. A total of 22,892 cards that met the following criteria were photocopied:

- Obvious Japanese surname and/or listed as of Japanese national origin; and
- Birthdate 1900-1919 inclusive.

After various exclusions (See Table 1), 12,417 men remained who had Oahu mailing addresses (obtained from telephone directories and other sources) believed to be correct as of January 1965.

A target population of 14,426 eligible men residing on Oahu had been estimated, using 1960 census data. The selective service roster had succeeded in identifying about 86% of the maximum number of men eligible for study.

A four-page bilingual HHP questionnaire was mailed to these 12,417 men in early 1965, requesting brief self-reported socio-demographic data, physical activity, weight history, and smoking, drinking and medical history data. A total of 9,878 men returned the mailed questionnaire. All were invited to come to Kuakini Hospital for a (free) clinical examination and interview. As shown in Table 1, 8,006 (81%) did so over the three-year period from 1965 to 1968.

This first HHP examination collected extensive data[8] including: Family history,

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TABLE 1.
Honolulu Heart Program
Establishment of the study cohort of
men of Japanese ancestry, born 1900-1919, and
identified through 1940-'42 Statewide Selective Service Registration.*

Total cards copied from S.S. files	22,892	
Less those located on other islands	- 4,921	
Less those who died prior to 1965	- 1,738	
Less known out-migrants since World War II	- 192	
Less those with no current address	- 3,624	
Remaining cards, with probably current addresses	12,417	questionnaires mailed 1965
Less questionnaires returned unlocated	- 1,269	
Balance — men located on Oahu 1965	11,148	located
Less men who refused to answer questionnaire	- 1,270	
Balance — questionnaire respondents	9,878	
Less men who refused examination	- 1,692	
Less questionnaire respondents who died before examination	- 180	
Balance — men examined Nov. 1965 - Nov. 1968	8,006	

* The Selective Service registrations covering this cohort were:
Oct. 1940, birthdates Oct. 1904-Oct. 1919; July 1941, birthdates Oct. 1919-July 1920; Feb. 1942, birthdates Feb. 1897-Dec. 1921.

socio-demographic information, diet history (usual and previous 24 hours[21]), smoking and drinking history, physical activity assessment, past and present medical conditions and treatments, anthropometric measurements, blood pressure, pulmonary function tests using Collin's spirometer, ECG, urinalysis, hematocrit, blood chemistries (glucose, uric acid, cholesterol, triglycerides); a standardized questionnaire on chest pain and intermittent claudication;[A10] and physical examination focused on the cardiovascular system. The HHP had now been launched, with an initial examined cohort of 8,006 Japanese-American men aged 45-68, living on Oahu and under longterm follow-up. Further details of the first interview-and-examination data and study design are given in the references cited above,[7, 8, 21] and in the very first HHP publication.[2] There have now been more than 90 papers published concerning CHD or stroke, using the HHP study population.

Over the 14 years following the completion of the first HHP examination, two full reexaminations of the cohort were completed, plus three examinations of a subsample of the men for lipoprotein determinations. (See Figure 1.)

At Exam II, data similar to Exam I were collected except for diet. A seven-day diet history was additionally obtained on a subset of 329 men. Exam III collected extensive questionnaire data, including diet and occupational history.

Serum samples from Exams II, III and from the three Lipoprotein (LP) examinations have been kept in frozen storage as an additional epidemiologic resource.

Various special studies have been undertaken by the HHP, including those using mailed questionnaires concerning acculturation, and the Jenkins Activity Survey questionnaire for Type A behavior.[93] (See Figure 1.) This extremely cooperative study population is still under study 20 years after the first HHP examination began.

The Japan-Hawaii Cancer Study

In the 1960s, an epidemiologic study of Japanese migrants[A12] showed that their cancer mortality risk changed with migration. From this observation came the idea for a migrant study of cancer *incidence* in Japanese subjects. William Haenszel from the National Cancer Institute (NCI) recognized the opportunity to develop such a study, using the existing HHP male cohort.

With the cooperation of the HHP staff, and with new NCI contract support, Haenszel established the Japan-Hawaii Cancer Study (JHCS) at Kuakini Medical Center in 1971. Dr. Gary Glober, first principal investigator of the JHCS, was responsible for its study design.

Exam III (See Figure 1) was designed for the JHCS as well as for the HHP. The Japan component of the JHCS was conducted by colleagues in Chokai Village, Akita prefecture. Some 1,700 subjects there completed a modified version of the Exam III questionnaire. Some biological samples (feces, blood, urine) were also collected at that time.

For the Hawaii component, 6,860 of the Exam I cohort returned for Exam III. Biological samples were again collected. In addition, 2,553 brothers and approximately 1,600 wives or sisters of JHCS cohort men also participated in Exam III. Various special studies have been undertaken using JHCS subjects from Hawaii and/or Japan. Some of these studies have been described (on a preliminary basis) earlier.[42]

This migrant population, under study by both the HHP and the JCHS, consists of subjects born in Japan *(Issei*, or first-generation Japanese) and subjects born elsewhere *(Nisei*, or second-generation Japanese). All were Oahu residents in 1965 when the HHP began. A third category is known as *Kibei.* They are *Nisei* who returned to Japan for five or more years of boyhood education. These categories are summarized in Table 2 for the 8,006 Exam I cohort men.

The JHCS is now in its 14th year of studying this migrant Japanese cohort. More than 80 papers have been published by the JHCS staff so far.

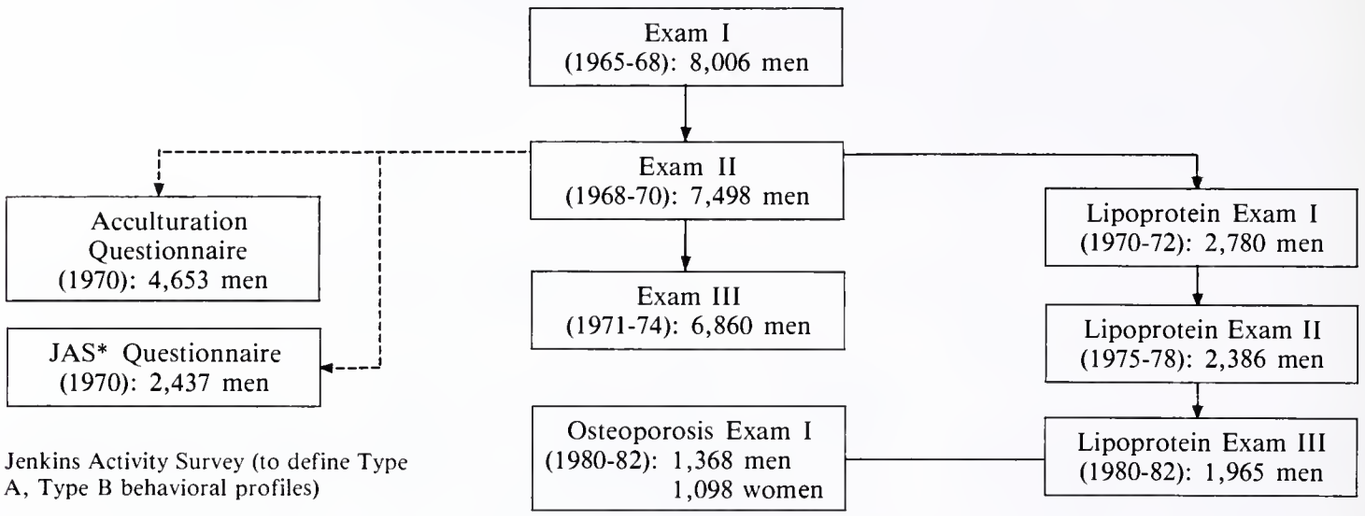
Surveillance and Current Status of the Cohort

All 11,148 HHP/JHCS men (See Table 1) are under longterm follow-up. Case-finding of heart disease, stroke, cancer, and related conditions (ulcer, benign prostatic hypertrophy, gallbladder disease, etc.) is accomplished by continuous surveillance of all Oahu general hospitals, plus review of death certificates and obituary notices. HHP morbidity/mortality conferences document and classify the cardiovascular events for surveillance input using abstracted hospital records. Thus, a comparison between the participants and the non-participants was possible.

The JHCS relies on a dual physician

Figure 1.

Examinations and questionnaire mailings during 1965-82 involving HHP men and women.



* Jenkins Activity Survey (to define Type A, Type B behavioral profiles)

review of surgery and pathology reports in order to document cancer cases. Each cancer incidence case is confirmed by histologic examination of surgical or biopsy tissue samples. Periodic linkage with the Hawaii Tumor Registry also reduces the possibility of missing cancer incidence cases. Retrospective case-finding efforts have identified incidence cases from Exam I to JHCS onset in 1971.

This cohort is a very stable population for epidemiologic study. Using data on a 30% sample of the original 8,006 men, it was estimated that only 1.8% of the study subjects could not be found on Oahu after 10 years of follow-up. Therefore, the HHP/JHCS surveillance network identifies virtually all of the newly diagnosed (incidence) cases of heart disease, stroke and cancer.

As of the 12th anniversary of each subject's Exam I date, 630 incidence cases of CHD (7.9%) and 382 incidence cases of stroke (4.8%) have been recorded among the 8,006 men. As of late 1984, 859 incidence cancer cases (10.7%) have been recorded in the combined HHP/JHCS surveillance data base. Total deaths number 1,405 (17.6%) from the most recent surveillance data available. The autopsy rate in recent years has averaged 23% of deaths per year.

Of the 11,148 men originally sent the four-page mailed questionnaire, 8,006 (71.8%) were eventually examined during 1965-'68. (See Table 1.) Using follow-up data on all 11,148 men under surveillance, it has been shown that CHD and stroke incidence was lower in the examined men (participants) over the first four years of follow-up.[43] More recently, it has been shown that the examined men also have lower overall mortality and lower cancer mortality than do the unexamined men (non-participants), using 10 years of follow-up data.[135] Perhaps the "advantage" of the examined men resulted from self-selection (volunteering) by the healthier subjects.

The Kuakini Osteoporosis Study

In concert with the HHP Lipoprotein (HHP-LP) Exam III (See Figure 1), a prospective study of osteoporosis was begun in early 1980 with support from the National Institute on Aging. The HHP-LP subgroup I men included a 30% random sample of the Exam II men. In 1980, the surviving 1,687 men from this random sample, and their wives, if also of Japanese ancestry, were invited to participate in the Kuakini Osteoporosis Study (KOS). Over a two-year period, 1,368 men (81% of 1,687) and 1,098 wives participated in the first KOS examination.

The KOS has made extensive use of the LP III and KOS questionnaire data, especially concerning diet, the use of food supplements and medications, and past history of fracture.

Because the HHP/JHCS surveillance system cannot monitor fracture occurrence, the KOS reexamines its subjects every 9 to 12 months, measuring bone mineral content (BMC) at four skeletal sites on each visit. The fifth KOS examination cycle is being conducted at present.

The major goal of this study is to relate levels of BMC — and eventually, BMC loss rates — to the risk of fracture.

Another goal is to determine the influence of various epidemiologic variables (e.g., estrogen usage) on BMC and/or fracture risk. To date, four KOS papers have been published, and two more are in press. The major findings of the KOS are summarized elsewhere in this issue of the JOURNAL.

TABLE 2.
Mean age at Exam I of
HHP/JHCS cohort men by generation

Generation*	N	(%)	Mean age at Exam I
Issei	941	(11.8)	62.4 years
Nisei	6,006	(75.0)	53.8
Kibei	1,059	(13.2)	54.5
Total	8,006	(100.0)	54.9

* See text for the definition of these subgroups.

Summary

This historical overview demonstrates that the HHP origins are rooted in the NI-HON-SAN tripartite investigation. In the mid-1960s, the HHP began by examining 8,006 Japanese men living on Oahu. In 1971, the JHCS joined in the longterm follow-up of this cohort. Hospital surveillance has provided very complete follow-up of heart disease, cancer and stroke events over the two decades of study. Exam I participants have lower total mortality, cancer mortality, CHD incidence and stroke incidence than the non-participants. In 1980, the KOS began to examine a subset of almost 2,500 men and women.

Coronary Heart Disease, Hypertension and Stroke Among Japanese-American Men in Hawaii: The Honolulu Heart Program

Katsuhiko Yano, MD
Dwayne M. Reed, MD, PhD
Abraham Kagan, MD

The Honolulu Heart Program (HHP) is a prospective epidemiologic investigation of coronary heart disease (CHD), hypertension and stroke among men of Japanese ancestry who were born from 1900 through 1919 and were living in Hawaii in 1965. The study began in 1965 as part of a tripartite study comparing the frequency of CHD and stroke and related factors among Japanese male populations in three geographic regions — Japan, Hawaii and California. It has confirmed the reported gradient in CHD and stroke mortality, prevalence and incidence among these Japanese men.

Parallel studies of autopsy findings and population characteristics have supported the hypothesis that migrant Japanese men have a higher risk of CHD and a lower risk of stroke than indigenous Japanese men because of Westernization of their lifestyles and environmental changes through migration. Also, a longterm follow-up of the 8,006 men who participated in the initial examination of HHP has provided valuable data on the incidence of cardiovascular disease and on biologic, lifestyle and psycho-social factors possibly related to the etiology of CHD, hypertension and stroke.

The Honolulu Heart Program (HHP) is a prospective epidemiologic investigation of coronary heart disease (CHD), hypertension and stroke among men of Japanese ancestry living in Hawaii. Its primary objectives are:

- To estimate morbidity and mortality resulting from CHD, hypertension and stroke among men of Japanese ancestry living in Hawaii;
- To compare the frequency of CHD, hypertension and stroke in Japanese men living in Hawaii with that of comparable populations in Japan and on the U.S. Mainland;
- To assess possible effects of environmental and lifestyle changes in Japanese migrants to Hawaii in terms of the risk for CHD and stroke; and
- To investigate biological, lifestyle and psycho-social factors associated with CHD, hypertension and stroke among Japanese men in Hawaii.

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Study Design

The target population of the HHP includes men of Japanese ancestry who were born from 1900 through 1919 and who lived on the Island of Oahu in 1965. More than 11,000 such men were identified and located through updated World War II Selective Service Registration records; 8,006 men participated in the initial examination between 1965 and 1968.[7] Their ages at examination ranged from 45 to 68.

Data obtained from participants at the initial examination included socio-demographic information, family history, past medical history, smoking, alcohol consumption, dietary intake, physical activity, anthropometric measurements, blood pressure measurements, determinations of hematocrit, serum cholesterol, triglyceride, uric acid and glucose; urinalysis; and a resting electrocardiogram and pulmonary function tests using a Collins spirometer.

In addition, each subject was examined by a physician, and a careful assessment was made to identify cases of existing CHD and stroke.

There were 301 men identified as definite cases of CHD and 111 men as cases of stroke. The remaining men, who were considered to be free of these diseases, have been followed for the development of new events of CHD and stroke. Case ascertainment has been accomplished by repeat examinations carried out two and six years after the initial examination, and by surveillance of hospital dis-

charges, obituary notices and death certificates.

The follow-up has been nearly complete thanks to the remarkable stability of the population — outmigration rate is less than 2 per 1,000 persons per year — and the excellent cooperation of the men and their families in the cohort. The response rates of the second and third examinations were 95% and 90%, respectively.

Autopsies have been performed on as many deceased men as possible using a standard protocol. At autopsy the degree of atherosclerosis in the coronary arteries, aorta and circle of Willis arteries has been evaluated in addition to the routine pathologic examination.

The ascertainment of CHD and stroke incidence and the determination of causes of death have been made by a panel of HHP physicians and pathologists based on all available medical information.

Details of the follow-up procedures, diagnostic criteria for CHD and stroke and methods of autopsy examinations have been published elsewhere.[39, 43, 54, 96, 108, 183]

Major Findings

Major findings of the HHP and related studies to date are summarized below:

1. The "NI-HON-SAN" study

A tripartite epidemiologic study of cardiovascular disease among Japanese men living in Hiroshima and Nagasaki in Japan, on Oahu in Hawaii, and in the San Francisco Bay area in California began in 1965. Its goal was to confirm the reported mortality gradient of increasing CHD among Japanese men in Japan, Hawaii, and California and the opposite gradient for stroke mortality.[A2, A7]

This study was named the NI-HON-SAN Study using an acronym for NIPpon-HONolulu-SAN Francisco. A common protocol was prepared to standardize methods of interviews, examinations and laboratory tests.[8]

As shown in Tables 1 and 2, baseline characteristics of Hawaii and California Japanese men were similar, but differed substantially from those of men in Japan.[31, 40] California and Honolulu men were slightly taller, substantially heavier and more obese, and had higher levels of serum cholesterol, glucose, and uric acid than the men in Japan. Systolic and diastolic blood pressure levels were highest in California, but were not significantly different in the men of Honolulu and Japan.

Cigarette smokers were more common in Japan than in the two migrant cohorts, but the proportion of heavy smokers was highest in the Honolulu men. Nutrient intake as measured by the 24-hour recall method[21] demonstrated that California and Honolulu men ate substantially more animal protein, total and saturated fat, cholesterol and simple carbohydrate than did the men in Japan; the reverse was true for the intake of vegetable protein, complex carbohydrate and alcohol. The percentage of calories derived from the ingestion of fat was 15% in Japan, 33% in Honolulu, and 38% in California.

As shown in Table 3, comparisons of the age-specific and age-adjusted rates of CHD and stroke mortality, prevalence and incidence among the three cohorts of Japanese men consistently demonstrated an increasing gradient for CHD from Japan to Honolulu to California, and a decreasing gradient for stroke, with differences between the two migrant cohorts being much smaller than those between the migrant Japanese men and the indigenous Japanese men.[40, 48, 51, 68, 74, 181] The age-adjusted prevalence rates of hypertension were highest in California, lowest in Hawaii and intermediate in Japan; the incidence of hypertensive heart disease and left ventricular hypertrophy by ECG was highest in Japan, lowest in Hawaii, and intermediate in California.[40]

Postmortem pathology studies conducted on the cohorts of men in Japan and in Honolulu have confirmed these clinical findings.[54, 96] The degree of atherosclerosis in the coronary arteries and the aorta was substantially more severe in the Honolulu cohort than in the Japan cohort. Recent myocardial infarction was 3.5 times more frequent and large myocardial scars were 1.5 times more frequent in Honolulu than in Japan.

Severe atherosclerosis and myocardial

TABLE 1.

Age-adjusted mean values and prevalence rates of selected variables at baseline examination of the NI-HON-SAN study

	Japan	Hawaii	California
Body weight (kg)	55.1	63.3	65.8
Subscapular skinfold (mm)	10.2	16.4	15.8
Systolic blood pressure (mmHg)	133	133	138
Diastolic blood pressure (mmHg)	83	82	88
Percent with hypertension (≥160/95)	22.4	19.4	31.6
Serum cholesterol (mg/dl)	181	218	226
Percent with hypercholesterolemia (≥260)	3.2	12.4	16.3
Serum triglyceride (mg/dl)[a]	134	229	235
Percent with hypertriglyceridemia (≥280)	6.1	24.6	25.2
Serum glucose (mg/dl)[b]	146	161	159
Percent with hyperglycemia (≥200)	11.3	20.2	19.2
Serum uric acid (mg/dl)	5.4	6.0	5.9

[a]Nonfasting value
[b]One-hour value after ingestion of 50g glucose

TABLE 2.

Mean values of nutrient intake (24-hour recall) at baseline examination of the NI-HON-SAN study

	Japan	Hawaii	California
Total calories	2,131	2,274	2,268
Animal protein (gm)	40	71	66
Vegetable protein (gm)	37	24	23
Saturated fat (gm)	16	59	66
Unsaturated fat (gm)	21	26	29
Cholesterol (mg)	457	545	536
Simple carbohydrate (gm)	61	92	96
Complex carbohydrate (gm)	278	169	155
Alcohol (gm)	28	13	9
Percent calories, protein	14.3	16.7	16.3
Percent calories, fat	15.1	33.2	37.6
Percent calories, carbohydrate	63.2	46.4	44.1

TABLE 3.

Comparative mortality, prevalence and incidence rates of CHD and stroke in the NI-HON-SAN study

		Japan	Hawaii	California
Average Annual Mortality Rates/1,000				
(Cause of Death)	(Age at Death)	(1965-'70)	(1966-'70)	(1968-'72)
CHD	50-54	0.4	1.1	1.3
	55-59	1.4	1.7	4.8
	60-64	2.1	3.9	4.9
Stroke	50-54	1.4	0.5	—
	55-59	1.5	0.9	0.5
	60-64	5.4	1.1	2.5
Age-adjusted Prevalence Rates/1,000				
Definite MI by ECG[a]		5.3	5.2	10.8
Possible MI by ECG[b]		20.1	29.5	33.8
History of angina pectoris[c]		11.2	14.3	25.3
History of MI[c]		7.3	13.2	31.4
Stroke (verified by physician)		42.5	15.0	13.0
Age-adjusted Incidence Rates/1,000 Person-Years				
MI + CHD Death[d] (by clinical exam)		1.4	3.0	
(by Community surveillance method)			2.8	4.3
Stroke[e]		7.4	2.7	NA

[a] Major Q/QS abnormalities: Minnesota Code 1-1-1 through 1-1-7.
[b] Minor Q/QS abnormalities: Minnesota Code 1-2-1 through 1-3-6.
[c] WHO cardiovascular questionnaire (Rose & Blackburn, 1968).
[d] 2-year follow-up in all three sites, with different methods of case ascertainment for Japan-Hawaii comparison and Hawaii-California comparison.
[e] Four-year follow-up in Japan and six-year follow-up in Hawaii.

ischemic lesions appeared at a younger age in Honolulu than in Japan.[54] The Honolulu men also had significantly more atherosclerosis of the Circle of Willis, but less intraparenchymal artery sclerosis and less cerebral infarction. Cerebral hemorrhage was much less frequent than infarction in both cohorts.

Thus, the migrant Japanese men in Hawaii were at much reduced risk of cerebral infarction through decreased frequency of intraparenchymal artery sclerosis, despite higher levels of atherosclerosis of large intracranial arteries.[96]

2. Comparisons with the Framingham and Puerto Rico studies

Geographic differences in prevalence and incidence of CHD in Caucasian men of Framingham, Mass., Japanese men of Honolulu and residents of Puerto Rico were studied using comparable methodology and criteria.[33]

The prevalence of CHD was twice as great in Framingham as it was in Honolulu and Puerto Rico. CHD incidence determined by ECG alone, by CHD death, or by both was from two to four times as high in Framingham as in Honolulu and Puerto Rico. These differences in CHD incidence could not be explained by differences in baseline levels of serum cholesterol, blood pressure and cigarette smoking.

3. CHD incidence and risk factors

During the first 10 years of follow-up, a total of 511 new CHD cases were identified among the 7,705 men of the HHP cohort who were judged free of CHD at the initial examination.[183] These included 139 cases of fatal CHD, 216 cases of non-fatal myocardial infarction (MI), 55 cases of acute coronary insufficiency and 101 cases of angina pectoris.

Independent predictors of total CHD identified by multivariate logistic analysis were age, blood pressure, serum cholesterol, serum uric acid, glucose intolerance and cigarette smoking. Alcohol consumption, vital capacity and physical activity were inversely related to total CHD incidence in the same analysis. Body mass index (weight/height^2), hematocrit and serum triglyceride were significantly associated with total CHD incidence only in bivariate analysis adjusted for age.

The relationship of these biologic and lifestyle variables to different manifestations of CHD varied considerably. The number of significantly associated risk factors increased with severity of clinical manifestation of CHD.

Among the variables studied, systolic blood pressure was the most powerful and consistent risk factor for all manifestations of CHD except angina pectoris. Cigarette smoking showed a similar pattern. Serum cholesterol was significantly associated with fatal CHD and non-fatal MI, but its contribution to CHD risk was less potent than systolic blood pressure or cigarette smoking. Alcohol consumption demonstrated a strong protective effect against fatal CHD and non-fatal MI.

The relationship of nutrient intake, assessed by 24-hour recalls at baseline examination, to 10-year incidence of CHD was also evaluated.[172] In multivariate analyses (controlling for age, body weight, systolic blood pressure, serum cholesterol, cigarette smoking and physical activity), total caloric intake, the intake of starch, and the intake of alcohol were inversely associated with total CHD incidence, while the percentage of calories from protein and fat, and the intake of cholesterol per 1,000 calories were directly associated with total CHD incidence. These results resemble those obtained in the Framingham and Puerto Rico studies,[119] and suggest that either increasing carbohydrate intake or decreasing the percentage of calories from fat may reduce CHD risk.

4. Stroke incidence and risk factors

During 10 years of follow-up a total of 238 men developed stroke, including 154 cases of thrombo-embolic (T-E) stroke, 65 cases of intracranial hemorrhage (ICH) consisting of 35 cases of cerebral hemorrhage and 30 cases of subarachnoid hemorrhage, and 19 cases of unknown type.[191] The ratio of T-E stroke/ICH was 2.3. The case fatality was 11% for T-E stroke and 68% for ICH.

The independent risk factors for T-E stroke were elevated blood pressure, age, glucose intolerance, ECG evidence of left ventricular hypertrophy or strain, cigarette smoking and proteinuria. The independent predictors of ICH were blood pressure, age, cigarette smoking, serum uric acid and, inversely, serum cholesterol. ECG evidence of left ventricular hypertrophy or strain significantly increased the risk of cerebral hemorrhage, but was not associated with subarachnoid hemorrhage.

In bivariate analyses (adjusting for age), alcohol consumption was significantly and directly related to ICH and total stroke incidence, while fat (or protein) intake was inversely related to T-E stroke and total stroke incidence. These associations of dietary factors with stroke incidence did not persist in multivariate analyses. No relation was found between salt intake and stroke incidence.

Table 4 summarizes independent risk factors for CHD and stroke based on multivariate analyses of 10-year incidence data.

5. Correlates of blood pressure and impact of elevated blood pressure upon mortality

The 8,006 Japanese men who participated in the initial examiniation of the HHP and those who were re-examined six years later were studied for factors associated with blood pressure levels.[149] Bivariate and multivariate analyses of more than 50 variables indicated that obesity, age, hemotocrit, heart rate, forced vital capacity (inversely), serum triglyceride, serum uric acid, cigarette smoking (inversely), and family history of hypertension were independently associated with both cross-sectional levels and longitudinal changes in blood pressure. Serum glucose and alcohol consumption were associated only with cross-sectional levels.

There was little evidence of an association between blood pressure and the intake of major nutrients, type of diet (traditional Japanese vs. Western), diet change, or use of salt.

Furthermore, there was no support for the hypotheses that elevated blood pressure resulted from the stress of migration, acculturation or status incongruity. A more detailed study of the relationship between diet and blood pressure[194] indicated that the intake of calcium, potassium, protein, and milk were inversely associated with blood pressure when examined one at a time while controlling for other risk factors. The association with potassium was relatively stronger than the associations with other nutrients, but the intake of potassium was so highly correlated with the intake of calcium, milk and protein that it was not possible to identify the independent association of potassium with blood pressure.

The impact of blood pressure upon total and cause-specific mortality during 10 years of follow-up was studied for the 7,610 men who were free of CHD and stroke at baseline examination.[167] The age-adjusted rate of total mortality for men with definite hypertension ($\geq$ 160/95) was twice that for normotensive men ($<$140/90).

The relative risk of mortality was five for all cardiovascular diseases, four for CHD, and six for stroke. Men with borderline hypertension also had a significantly higher mortality rate than normotensive men. Both systolic and diastolic blood pressure levels were the most important independent predictors of cardiovascular mortality in multivariate analyses, taking into account 11 other known risk factors.

6. Lipoprotein study

Between 1970 and 1972, a subsample of the HHP cohort (2,780 men) had determinations of fasting plasma lipids and lipoproteins as part of the Cooperative Lipoprotein Phenotyping Study that compared the distribution of total, LDL and HDL cholesterols and triglyceride among six population samples in the United States.[55] These men consisted of three subgroups:

- A 30% probability sample of the HHP cohort.
- Men in the top 10% of the distribution of serum cholesterol or triglyceride at the initial examination.
- Existing cases of CHD and stroke.

It was found that the age-specific mean levels of total, LDL and HDL cholesterols in the random sample of the HHP cohort were similar to those in other populations, while the mean level of triglyceride was significantly higher in both Honolulu and San Francisco Japanese men than in white American men.[55] Total and LDL cholesterol levels were directly related to the prevalence of CHD, whereas HDL cholesterol was inversely related to it.[53]

There was no significant relation between triglyceride and CHD prevalence. The inverse association of HDL cholesterol with CHD prevalence was independent of total or LDL cholesterol, as well as of other CHD risk factors such as obesity, blood pressure and cigarette smoking.

Survivors among the men who participated in the initial lipoprotein examination were re-examined 10 years later between 1980 and 1982. The follow-up data demonstrated that baseline levels of total and LDL cholesterols were significantly associated with the incidence of all clinical types of CHD in multivariate analyses, while HDL cholesterol was inversely associated with total CHD and non-fatal MI, but not with fatal CHD or angina. Triglyceride and VLDL cholesterol were associated with total CHD only in bivariate analysis adjusting for age.

No other chronic diseases (stroke, total cancer and all other deaths) were significantly associated with any lipid or lipoprotein.[195]

The relationships of various biologic, lifestyle, socio-cultural and dietary factors to the levels of lipids and lipoproteins were also evaluated in this 10th anniversary examination. The strongest and most consistent correlates to lipids and lipoproteins were body mass index and alcohol consumption. Body mass index was positively related to total cholesterol, LDL cholesterol and triglyceride, and inversely related to HDL cholesterol. Alcohol consumption was positively related to HDL cholesterol and triglyceride, and inversely related to LDL cholesterol. Independent contributions of dietary factors other than alcohol were much weaker than those of non-dietary factors.

7. Analyses of psycho-social factors

The HHP cohort includes migrants from Japan and Hawaii-born men of Japanese ancestry. The spectrum of cultural transition provided varying grades of acculturation and social networks that can be examined as risk factors for cardiovascular and other chronic diseases.

In an earlier study based on the six-year follow-up data of the entire cohort, it was found that the length of time spent in Japan during childhood and the ability to read or write Japanese were signifi-

(Continued on page 312)

TABLE 4.

Independent risk factors for CHD and stroke in the Honolulu Heart Program
(Multivariate logistic analyses of 10-year follow-up data)

Total CHD	Thrombo-embolic stroke	Intracranial hemorrhage
Age	Age	Age
Blood pressure	Blood pressure	Blood pressure
Cigarette smoking	Cigarette smoking	Cigarette smoking
Serum cholesterol	Glucose intolerance	Serum uric acid
Glucose intolerance	ECG-LVH/LVS	Serum cholesterol*
Serum uric acid	Proteinuria	ECG-LVH/LVS (only for cerebral hemorrhage)
Alcohol consumption*		
Vital capacity/height*		
Physicial activity index*		
Total calories/day*		
Starch (gm)/day*		
% Calories, protein		
% Calories, fat		
Cholesterol/1000 calories		

*Inverse relationship.
Intracranicl hemorrhage includes subarachnoid hemorrhage and cerebral hemorrhage.

Gastric Cancer Among the Japanese in Hawaii: A Review

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A number of studies related to gastric cancer have been done among the Japanese in Hawaii. Some of the findings are described here. Japanese in Hawaii have a lower rate of stomach cancer than their counterparts in Japan, mainly due to the reduced occurrence of the intestinal type of gastric cancer. Diets high in the intake of pickled vegetables and dried/salted fish, and low in the intake of raw vegetables, have been linked to an increased risk for stomach cancer.

Serum vitamins A and E and beta carotene are not associated with gastric cancer risk. There is no relationship between HLA antigens and stomach cancer. A low level of serum pepsinogen I is a marker of increased risk for the intestinal type of gastric cancer, usually at an advanced stage of the disease. Mutagenic activity has been found in gastric mucosa. Future work should be focused on identifying biochemical markers that will identify subjects who are at high or low risk for this disease.

TABLE 1.

Age-standardized, annual stomach cancer incidence rates per 100,000 by locale, ethnicity and sex[A31]

Locale, Ethnicity	Men	Women
Fukuoka, Japanese	75.0	38.4
Singapore, Chinese	43.7	17.6
Hawaii, Hawaiians	36.6	18.6
Hawaii, Japanese	34.0	15.1
Hawaii, White	12.2	5.0
Detroit, White	10.5	4.4
Hawaii, Chinese	10.0	6.9
Hawaii, Filipino	8.7	5.3

In the United States, there has been an 80% reduction in gastric cancer mortality rates since 1930.[A33] At that time, gastric cancer was the leading cause of death due to cancer among men, and the third leading cause of cancer death among women. Despite this decrease in stomach cancer risk, it is still a disease of significant impact. The American Cancer Society (ACS) estimated that there would be 25,000 new cases of stomach cancer — almost 500 per week — in the United States during 1984.

Persons of Japanese ancestry living in Hawaii have a lower risk of developing gastric cancer than their counterparts living in Japan. This is shown in Table 1, which also presents data to indicate, however, that Hawaiians and Japanese in Hawaii have a greater risk for gastric cancer than their neighbors who belong to other ethnic groups.[A31] Table 1 further

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shows that men have approximately a twofold greater chance of being diagnosed as having gastric cancer than women.

Because of the marked reduction in gastric cancer incidence in Hawaii and elsewhere, it is obvious that environmental factors contribute more significantly to the etiology of this disease than does genetic predisposition.

The major challenge at the present time, as it has been in the past, is to identify these causative factors. The difficulty of this task is accentuated by the fact that the causative factors of gastric cancer can be operating during youth, often 40 to 50 years before the disease is diagnosed.[A27]

As a result, the search for the clues to the cause of gastric cancer is a very difficult one. This review will summarize the results of studies done among the Japanese in Hawaii; these studies have furthered our knowledge of gastric cancer.

Pathology of Gastric Cancer and Related Conditions

Stomach cancer can be separated into the intestinal type and the diffuse histopathological type, according to Lauren's classification.[A4] Earlier work has shown that the reduction in the incidence of gastric cancer occurred mainly in the intestinal type.[15] This decrease has been experienced by both men and women. There has also been some reduction in the diffuse type but not to the same extent as with intestinal type of gastric cancer. Other investigators have made similar observations in other population groups.[A13, A14]

It also has been found in Hawaii that patients with the intestinal type of gastric cancer have better survival experience compared with patients who are diagnosed as having diffuse gastric cancer.[26, 75] Overall, 27.4% of patients with intestinal type cases have survived as long as five years, compared with only 9.9% of the patients with diffuse type cases.

Patients with extensive intestinal metaplasia of the stomach are at high risk for the development of gastric carcinoma. There is considerable controversy as to whether the metaplastic tissue is a cancer precursor, probably because carcinomas do not always arise in metaplastic tissue.

Studies among the Hawaii Japanese, however, indicate that metaplastic epithelium differs from normal intestinal mucosa in many respects:

- Histochemistical studies indicate that metaplasia cells produce different types of mucus and different enzymes from those of the normal small gut;[3, A29]
- Ultrastructural studies indicate that metaplastic cells may produce cilia and abnormally long, branching microvilli, that some cilia have an abnormal configuration, and that some cells show intracytoplasmic cysts lined by surface elements.

These findings suggest that intestinal metaplasia is a form of dysplasia and may account for some carcinomas.[178]

Organ cultures from Hawaii Japanese subjects showed the presence of glands with increased cell replication adjacent to gastric ulcers.[172] Since cell transformation is most likely to occur during the S-phase of the cell cycle, it follows that having an increased number of cells in S-phase will expose more cells to the risk of cancer induction.

This might explain the well-documented observation that early gastric cancers not infrequently arise from tissues near gastric ulcers.[71]

Diet

Since ingested food is regularly in contact with the gastric mucosa, diet is of obvious interest. An investigation involving 220 Japanese stomach cancer patients and 440 hospital controls revealed that *Issei* (born in Japan) and *Nisei* (born elsewhere, usually Hawaii) who ate pickled vegetables and dried/salted fish had about twice the risk for the disease[A16] compared to those who didn't eat those types of food. Similar associations were not found with raw fish and unprocessed vegetables. This focused suspicion on the methods of food preparation. Low risk was attached to eating several Western vegetables, many of which were eaten raw.

In another study done here in Hawaii, dietary data were related to the gastric cancer incidence rates of four groups in Hawaii: (a) Japanese born in Hawaii, (b) Japanese born elsewhere, (c) Caucasians born in Hawaii, and (d) Caucasians born elsewhere.[A30] There were positive associations between stomach cancer and the consumption of rice, pickled vegetables and dried/salted fish, and a negative association with vitamin C intake.

A number of past case-control studies have shown also that gastric cancer patients gave a history of consuming more salted, pickled or other preserved food and less vegetables and fruits than control subjects.[A6, A15, A20, A34] Such preserved food has been found to have higher levels of N-nitroso compounds, or their precursors, which have been suspected as causative agents for gastric cancer.[A35]

These findings are consistent with past studies that have repeatedly shown that persons of low socio-economic status have a high risk for gastric cancer.[A1, A9, A15, A16] Years ago, processed food was often less expensive or more readily available than fresh food, especially fruits and vegetables. The advent of refrigeration in the 1930s contributed to lowering the cost and increasing the availability of fresh food. Some observers attribute the decrease in stomach cancer occurrence to this event.[A22]

A case-control study of gastric ulcer among the Hawaii Japanese demonstrated that this condition, like cancer, is frequently associated with intestinal metaplasia.[71] Gastric ulcers associated with metaplasia were strongly related to high salt intake.

Serum Vitamins

Vitamin A may be protective against cancer through its influence on the regulation of cell proliferation and differentiation.[A41] It can also prevent tumor de-

TABLE 2.

Median values of serum vitamins among stomach cancer patients and controls

Serum Vitamin	Cases (70)	Controls (302)	P-Value
Beta-carotene (mg/dl)	22.8	29.0	>0.10
Vitamin A (mg/dl)	60.4	59.6	>0.50
Vitamin E (mg/ml)	12.2	12.3	>0.50

velopment in many experimental systems. Vitamin E has anti-oxidant properties that can suppress neoplasia in animals.[A32] It also blocks the formation of N-nitroso compounds, which are potent carcinogens and have been implicated as a causative agent for stomach cancer.[A36] Beta carotene or pro-vitamin A has the ability to suppress cancer formation in laboratory animals.[A42]

The JHCS collected sera from the 6,860 Exam III men from 1971 to 1974. After approximately 10 years, 70 men were diagnosed as having stomach cancer. The stored prediagnostic sera of the stomach cancer cases and 302 controls without cancer were tested to determine their beta carotene, vitamin A and vitamin E levels. The results are given in Table 2.[193] There was no significant association between any of these vitamins and gastric cancer risk, but there was a weak suggestion that stomach cancer cases had a low serum beta carotene level. However, further analysis showed that the association occurred mainly in cases diagnosed within five years of the date the serum was drawn during examination. This suggested that the low beta carotene level might have resulted from the presence of cancer and was not a precancerous marker.

HLA Antigens

Besides the differences in survival patterns and the effects of migration between the two types of gastric cancer, the diffuse type also differs from the intestinal type in its association with blood type A. This blood type is found more frequently in Japanese patients with diffuse gastric cancer in Hawaii than in patients with intestinal type cancer (49% vs. 39%); the latter have a pattern similar to the control group (38%).[15]

This suggests there may be a difference in host susceptibility for the two histological types of gastric cancer. A series of 99 patients with gastric cancer and 222 controls were studied to see if HLA antigens might also differ by histological type.[111] No significant differences in antigen frequency were noted between cases of the diffuse, the intestinal and the controls, or between the diffuse and the intestinal gastric cancer cases.

Serum Pepsinogen I

Pepsinogen I is a proteolytic enzyme that is secreted by mucous neck cells and chief cells in the corpus of the stomach. It was shown in subjects residing in Hawaii and in Japan that a low serum level of pepsinogen I was highly specific for extensive intestinal metaplasia of the stomach.[90]

Because intestinal metaplasia is considered a precursor lesion for gastric cancer, it was reasonable to expect that a low pepsinogen I level might also be a subclinical marker of increased susceptibility for gastric cancer. This was indeed found to be the case.

TABLE 3.

Incidence rate of stomach cancer per 100,000 person-years, adjusted for age and cigarette smoking status at the time of examination.

Alcohol intake (oz/mo)	Rate
None	108.4
<5	61.4
5-14	113.5
15-39	95.5
40+	93.4

A low pepsinogen I level was found in prediagnostic stored serum from 15 of 48 patients with stomach cancer and in only six of 96 matched control subjects ($p < 0.001$).[112] All 15 patients with low levels belonged to the subgroup of 38 who had intestinal type gastric cancer. No association was found between serum pepsinogen I and diffuse type gastric cancer. All 15 patients had stage three or four disease at time of diagnosis.

A companion study[117] found that only two of 19 patients with early stomach cancer had a low pepsinogen I level in serum taken just before gastrectomy, suggesting that most patients with gastric cancer and a low pepsinogen I level will have advanced disease.

Mutagens in Gastric Tissue

The Ames test, applied to chemicals, has been extensively used to detect the presence of mutagenic activity that has been associated with the carcinogenic potential of many compounds.[A18] Extracts of mucosa from 53 stomachs were tested for mutagenicity with the Ames test.[116] This was found in non-neoplastic mucosa from nine of the 53 stomachs.

The area of gastric mucosa that showed the highest degree of mutagenic activity was the greater curvature at the distal antrum, an area of intermediate risk for the development of intestinal metaplasia.

The further finding that mutagenic activity was limited to extracts from stomachs that showed some degree of intestinal metaplasia and was absent in oxyntic gland and duodenal mucosa suggests that mutagenicity is an antral event possibly related to intestinal metaplasia of the antrum.

Miscellaneous Studies

Additional investigation has shown that there is a lack of association between stomach cancer and serum cholesterol. The mean cholesterol level in prediagnostic sera from 83 stomach cancer cases was 219 ng/dl, compared with a mean of 218 ng/dl for 7029 other subjects who did not develop gastric cancer after a follow-up period of about 14 years in the study.[132]

Alcohol intake also was not associated with gastric cancer risk.[175] As shown in Table 3, the rate of stomach cancer did not increase as alcohol consumption progressively increased in study subjects.

The association of body weight with cancer risk was studied in the Japanese population. It was found that a loss in weight was associated with an increased risk for stomach and lung cancer.[185] This was not observed for cancer of the prostate, colon, rectum, or all other sites combined.

Further investigation revealed that this negative association with stomach cancer was limited to cases diagnosed within five years of the patients' examination. This suggested that weight loss was more evident for stomach cancer than for the other cancers.

Conclusion

The prevailing view is that diet is crucial to the development of gastric cancer. It has been observed that the intake of nitrates and the presence of gastric bacteria with nitrate reductase-activity can affect the nitrite levels in the stomach. The concentration of gastric nitrite is a major factor in regulating the endogenous synthesis of N-nitroso compounds, which are potent carcinogens in the experimental system.[A35, A36]

N-nitroso compounds are suspect as a causative factor of stomach cancer. It will be a formidable task to prove this because of the difficulty in obtaining direct evidence linking increased gastric cancer risk to an acceptable method of measuring increased exposure to any specific N-nitroso compound that is often unstable.

Since vitamin C can block the formation of nitrosamines, which are a class of N-nitroso compounds, it may be possible that vitamin C is a protective agent against stomach cancer.[A42]

Current efforts are directed toward finding biochemical markers that will identify subjects who are at high or low risk for gastric cancer. The identification of such biomarkers will provide clues to further our understanding of the mechanisms leading to the development of gastric cancer.

Based on JHCS data, serum levels of beta carotene, vitamin A and vitamin E do not appear to be useful biomarkers for gastric cancer, but more work is needed in this area of investigation.

Colorectal Cancer in Hawaii Japanese

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Cancer of the large bowel in Hawaii Japanese, like that encountered in U.S. Caucasians, is most likely to involve the colon, especially its sigmoid and ascending segments. It is increasing in frequency, only in part because this population is long-lived; the increase in frequency is greater in men than in women. The environmental factors that may be linked to colon cancer are increased weight gain after age 25, sedentary occupation and decreased fecal fiber content.

Unlike in the CHD study, colon cancer subjects studied consumed less fat and had low serum cholesterol levels. These features, and the different trends in risk prevalence, indicate that the two conditions affect different subsets of Hawaii Japanese. Men with rectal cancer also differ epidemiologically from those with colon cancer in that the former show an increased consumption of alcohol — especially beer — and fat.

Most Japanese immigrants came to Hawaii as contract laborers in the sugar and pineapple industries. They came largely from the rural districts of a few prefectures, for the most part in Southern Japan. Many of the men of the migrating generation remained in Hawaii at the completion of their contracts, gaining employment as artisans, small merchants and independent farmers. The second generation continued in these trades and, in addition, entered the professions in large numbers.

The long-term result was an increase in affluence and working in occupations that were less physically demanding. The Hawaii Japanese population is now largely urban, no longer consumes a typical Japanese diet, and pursues social practices that are more Western than Japanese.

Comparison of the Hawaii Japanese incidence rates of colorectal cancer with those of Fukuoka Japanese (See Table 1) indicates a rise in the frequency of tumors at both sites (colon and rectum) and in both sexes, although the post-migrational increase is greater among males.[A31] The Japanese in Honolulu and Los Angeles experience similar rates, indicating that the increased risk of large bowel cancer is not a regional peculiarity; in both cities the Japanese male cancer rates exceed those of their Caucasian neighbors.

The recent trends in colorectal cancer incidence in Hawaii Japanese are shown in Table 2 (unpublished data, Hawaii Tumor Registry). It is apparent that the incidence of rectal cancer is fairly stable for both sexes, but that male colon cancer has increased over the period 1962-'81. A comparable increase in colon cancer is not apparent in Hawaii Japanese women.

The change in colorectal cancer risk suggests the influence of one or more environmental factors, because genetic variables probably held constant between native and migrant Japanese. This review will summarize the results of those JHCS investigations that identify features in the external and internal environment that might explain the rise in large bowel cancer risk among Hawaii Japanese.

The Dietary Change

When compared with men of similar age in Hiroshima, Japan, using the same diet interview techniques, it is apparent that Hawaii men consume more protein and fat and less carbohydrate than Hiroshima men.[31]

Moreover, the types of these nutrients also differ. A larger proportion of the protein in Hawaii is of animal origin, a larger proportion of the fat is saturated, and a smaller proportion of the carbohydrate is complex. These differences are consistent with the hypothesis that diets rich in fat favor the development of colon cancer.

However, when a prospective study was done to test the hypothesis, the results did not indicate that heavy consumers of saturated fat had a greater risk of developing colon cancer. In fact, the low consumers of saturated fat had the highest risk for the disease, whether the intake was in gm/day or as a percent of calories.[180]

Rectal cancer appears to show a strong positive association with alcohol intake[174] and a weak positive association with fat intake.[180] Thus, colon and rectal cancer differ in respect to diet as well as in respect to their different trends in incidence.

Body Weight

McGee et al[192] found that total fat and caloric intake were related significantly and inversely to total mortality, cancer mortality and stroke mortality. It might be anticipated that body weight, fat intake and caloric intake would be well correlated; but in the case of colon cancer, body weight diverges from the other two variables. Weight gain from age 25 on is directly related to colon cancer risk in men who were older than 55 at the time of first exam. (See Figure 1.) This suggests that for colon cancer the balance between energy consumption and expenditure might be more important than the amounts or types of nutrients consumed.

TABLE 1.
Age-adjusted annual colorectal cancer incidence rates per 100,000 by locale, ethnicity and sex[a]

	Colon		Rectum		Total	
	Male	Female	Male	Female	Male	Female
Fukuoka, Urban	8.7	6.8	8.9	5.4	17.4	12.2
Fukuoka, Rural	6.7	6.5	8.5	5.9	15.2	12.4
Hawaii Japanese	27.5	18.8	21.4	8.8	48.9	27.6
Hawaii White	25.3	17.8	14.1	8.9	39.4	26.7
L.A. Japanese	30.8	19.6	21.7	11.7	52.5	31.3
L.A. White	28.0	24.3	14.7	10.0	42.7	34.3

[a] Rates adjusted to world population.

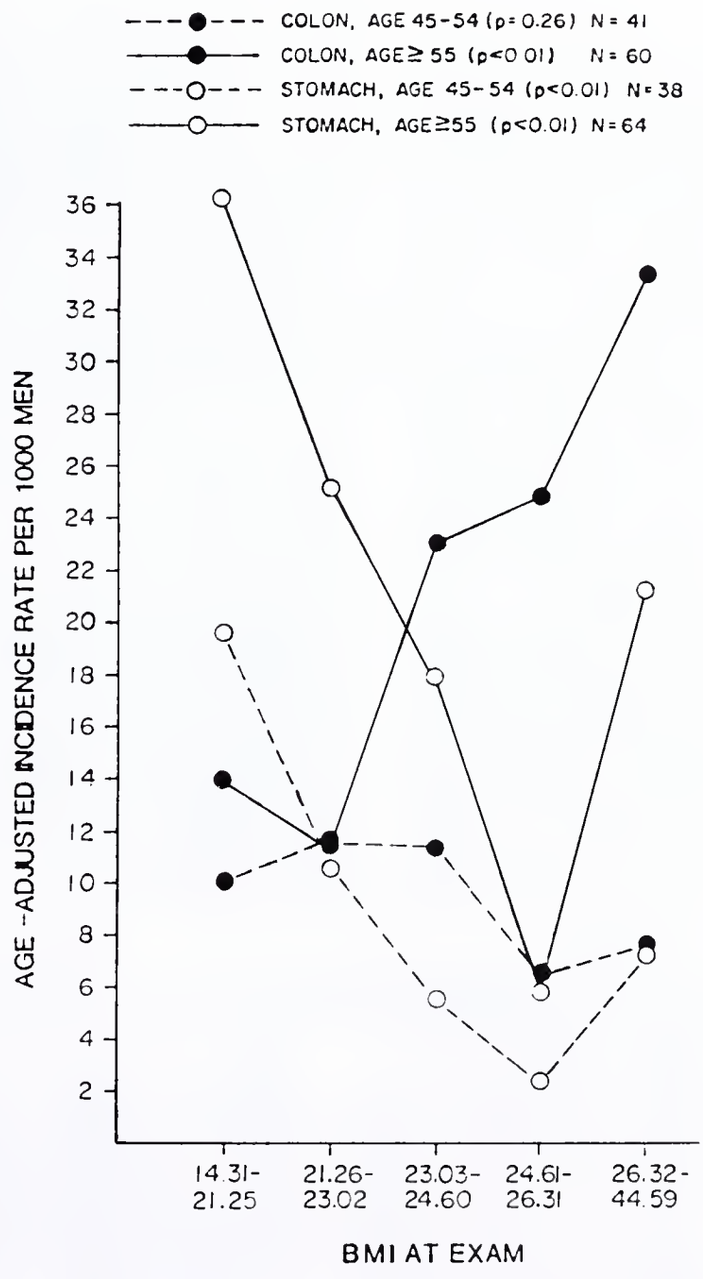
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TABLE 2.
Hawaii Japanese age-adjusted annual incidence rates* per 100,000 Colon and Rectal Cancers, 1962-1981

	Colon		Rectum	
	Male	Female	Male	Female
1962 - 1965	19.1	16.3	16.0	8.6
1966 - 1969	25.4	20.3	16.0	9.7
1970 - 1973	22.3	20.7	18.0	8.0
1974 - 1977	27.3	18.3	21.6	9.2
1978 - 1981	34.2	20.6	17.6	9.0

* Rates adjusted to Hawaii Japanese population.

FIGURE 1. Age-adjusted incidence per 1,000 men of colon and stomach cancer by age group and, within age group by quintile of BMI (Kg/M^2) at exam. P value is for linear trend from Mantel-Haenszel extension test. (BMI = Body Mass Index.)



Bowel Transit Time

Japanese men in Japan should have a faster bowel transit time (BTT) than those in Hawaii if this factor is a significant risk factor for colon cancer. We have estimated the BTT among Hawaii Japanese and Caucasians and among Japanese men in Akita prefecture, Japan.[25, 29] The BTTs were rapid for both the indigenous and Hawaii Japanese in spite of the great differences in their colon cancer risks, whereas the BTT in Hawaii Caucasian men was prolonged although their rate of colon cancer was similar to those of Hawaii Japanese.

The weights of the stools of Hawaii Japanese and Caucasians were lower than those of the Akita Japanese. Although these data indicate that the BTT is probably not related to colon cancer risk, they are at least suggestive that higher fiber content is protective against colon cancer.

Fecal Chemistry

Fecal samples from asymptomatic Japanese men in Hawaii and Akita have been compared for the presence of mutagens and for measurements of bile salts and neutral steroids. Mower et al.[83] could not show any positive association between meat, fat or protein intake and lithocholic, deoxycholic or other degraded bile acids; nor could Mower et al.[97] demonstrate any convincing association between the different colon cancer risks of Akita and Hawaii Japanese subjects and the nature of their bile salts.

Nomura et al.[156] measured the fecal neutral steroids in Akita and Hawaii Japanese men. The Hawaii men had higher concentrations of cholesterol and total animal steroids, but the rest of the findings on neutral steroids were unremarkable or inconsistent with other studies. These findings were suggestive but did not strongly support a relation between neutral steroids and colon cancer risk.

Mower et al., using two bacterial test systems *(Salmonella* typhimurium, TA 98 and TA 100; *Escherichia coli rec,)* have searched for fecal mutagenic compounds.[141] They noted that water-soluble mutagens were more common in Hawaii men than in Akita men. This activity appeared to be due to more frequent trans-nitrosoase activity in Hawaii Japanese feces. These results are consistent with the concept that TA 98 mutagens formed by bacterial trans-nitrosoase activity may be related to the high colon cancer risk of Hawaii Japanese.

Blood Lipids

The serum cholesterol levels of the JHCS men who subsequently developed colon (N=80) or rectal (N=54) cancer were compared to the cholesterol levels of men who subsequently developed CHD, three other forms of cancer (prostate, stomach, lung) and 7,029 noncases.[132] Cholesterol levels below 180 ng/dl predicted low rates of CHD and

high rates of colon cancer.

The absence of a similar association with other cancers and the persistence of this inverse association up to 10 years after examination suggest that the low serum cholesterol level was not due to pre-existing disease.

Ascending colon cancer showed the strongest inverse association with serum cholesterol. Rectal cancer showed neither direct nor inverse association with the serum cholesterol level.

The plasma lipoprotein fractions have been measured in a subset of the JHCS cohort. The mean values for these fractions (adjusted for age, alcohol intake and body mass index) are shown in Table 3. Although the number of study cases is small, the negative association with HDL merits further study.

TABLE 3.
Serum Lipoprotein Fractions,
Colorectal Cancer, Hawaii Japanese*

	Cholesterol	HDL	LDL	VLDL	Triglyceride
Colon (31)	223	40.1[a]	137	45.7	247[b]
SE Mean	7.2	2.0	7.2	5.2	29.4
Rectum (15)	232	45.1	155	32.5	202
SE Mean	10.3	2.9	10.3	7.4	42.3
Controls (1889)	229	44.8	148	36.3	194
SE Mean	0.9	0.3	0.9	0.66	3.7

* Adjusted for age, body mass index, alcohol intake.
[a] $p \leq 0.05$
[b] $p = 0.07$

Legend
HDL = Hi-density lipoproteins
LDL = Lo-density lipoproteins
VLDL = Very lo-density lipoproteins
SE = Standard error
() = Number of cases

Miscellaneous Studies

Measurement of the serum levels of three vitamins (B carotene, vitamin A and vitamin E) has failed to indicate any protective effect of these substances upon cancers of colon or rectum.[193] The digital dermal patterns were assessed in 149 colorectal cancer patients and in 298 population-based controls.[124] Patterns were similar in the two groups. Also, there were no significant differences found in total ridge counts, suggesting that antenatal factors are not associated with the risk of large bowel cancer.

Pathology

A review of Hawaii Japanese colorectal carcinomas done by the pathology department of Kuakini Medical Center in the 10 years from 1972 through 1981 is summarized in Table 4. Women patients predominated in terms of cancers proximal to the splenic flexure, while descending colon and rectum cancers predominated in men. Adenomatous polyps were more frequently associated with right-sided tumors in both sexes, but were more common in men than in women. The subset distribution of colorectal cancers among men in the JHCS cohort is almost identical with that noted in Table 4, suggesting that it is representative of the Hawaii Japanese experience with this tumor.

A review of cancer found at autopsy in 1,376 Hawaii Japanese more than 65 years old[150] indicated that large bowel cancer had developed in 93 patients and was diagnosed only at autopsy in 28 (30%) of these. This cancer increased in frequency with age. In eight cases, the undiagnosed tumor was the cause of death, but in 20 cases it was a Dukes A stage and asymptomatic.

A comparison of the frequency of diverticulosis, adenomatous polyps and hyperplastic polyps between Honolulu Japanese and Tohoku Japanese at autopsy indicated that each of these conditions has increased in frequency in Hawaii.[133]

The most striking contrast between Japan and Hawaii was noted for diverticulosis, presumably because of higher dietary fiber in Japan.

The difference in frequency of hyperplastic polyps was also much greater than for adenomatous polyps. Although it is generally acknowledged by pathologists that most colorectal cancers arise in adenomatous polyps, it is apparent that hyperplastic polyps and diverticula are more sensitive indicators of Westernization.

The hyperplastic polyps were more likely to occur in those segments of the colon that exhibited the highest frequency of cancer. It would appear that the greater frequency of adenomatous polyps accompanying cancer in the right colon, as compared to the left colon, merely reflects the distribution of these lesions in the population as a whole.

But if they are precursors of cancer, why are they not more numerous on the left? It is possible that the mucosa of the left colon is exposed to higher concentrations of carcinogens than the right, and that the elapsed time between the transformation that produces the adenoma and the development of an invasive tumor is dose-dependent. Higher concentration of carcinogens in the left colon could result from absorption of water from the fecal bolus or by concentration of carcinogens at the cellular level as a result of increased absorption. The latter could result if, as suggested by Hayashi et al.,[32] the cells of hyperplastic polyps were hypermature and were more efficient absorption units than normal colonic epithelial cells.

TABLE 4.
Colorectal Carcinoma and Adenomatous Polyps,
Kuakini Medical Center 1972-'81 — Department of Pathology

	Cecum	Ascend. Colon	Transv. Colon	Descend. Colon	Sigmoid	Recto-Sigmoid	Rectum	Total
Male Carcinoma	16	50	26	25	179	56	91	443
Polyps (%)	8(50)	34(68)	14(54)	14(56)	67(37)	19(34)	11(12)	167(33)
Female Carcinoma	18	41	32	15	100	20	39	265
Polyps (%)	8(44)	24(58)	13(40)	5(33)	22(22)	2(10)	7(23)	83(31)
Total Carcinoma	34	91	58	40	279	76	130	708
Polyps (%)	16(47)	58(64)	27(47)	19(48)	89(32)	11(14)	18(14)	250(35)

Predictors of Health in Men of Japanese Ancestry in Hawaii

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Richard Benfante, PhD, MPH**

A cohort of more than 5,000 men of Japanese ancestry, aged 46-69 and free of chronic disease at entry examination, were studied for factors associated with remaining free of major chronic diseases during a 12-year follow-up period. More than 2,200 disease-free men were compared with 2,749 individuals who developed coronary heart disease (CHD), stroke, cancer or a variety of other chronic diseases.

Of more than 30 variables examined in multivariate analyses, those of blood pressure, obesity, cigarette smoking, alcohol consumption, serum glucose, uric acid and triglyceride were inversely associated with staying healthy; on the other hand, forced vital capacity and being born in Japan were directly associated with good health. Of the nine variables, blood pressure was the strongest discriminator between healthy status and all categories of disease, while cigarette smoking and alcohol consumption were the next most important factors.

This study suggests that the choice of individuals who remain free of disease as a "standard" for health can facilitate the evaluation of risk factors for both total illness and a broad range of specific chronic diseases in a single population.

The ongoing studies of CHD, stroke, cancer and total mortality in the Honolulu Heart Program have provided us with the opportunity to identify individuals who have remained healthy during the first 12 years of the follow-up period. This has allowed us to examine the question: What biological, cultural, social and lifestyle characteristics that can be measured during middle age are associated with remaining healthy during the later adult years?

To this end we have examined more than 30 biological and cultural characteristics measured at the baseline examination 1965-'68, for the total cohort of 8,006 men. We also measured a variety of behavioral and psycho-social factors in a subset of more than 4,500 men in 1971. Throughout this report, the emphasis is upon a comparison between the group of men who remained healthy, and the group that developed any major chronic disease or died. Details of the methods of the examinations, follow-up proceedings and diagnostic standards have been described previously.[7, 8, 31, 108, 183]

Results

Of the original cohort of 8,006 men of Japanese ancestry, 2,965 had evidence of CHD, stroke, hypertension, diabetes, ulcer, cancer, chronic lung disease or other chronic disease at the baseline examination. Of the remaining 5,041 men, 2,749 developed new chronic diseases or died during the first 12 years of follow-up, while 2,292 remained free of detectable disease.

Table 1 shows the number of cases and incidence rates of new disease. Hypertension was the most common problem, followed by gastrointestinal and metabolic disorders. Cancer was the most common fatal disease.

Table 2 shows the age-adjusted mean values of selected risk factors at the baseline examination by health status 12 years later. Variables statistically significant as single items were subjected to multivariate analysis. Age and 10 other variables were associated with remaining healthy.

Judging from dose-response patterns and levels of significance, blood pressure was the strongest and most consistent discriminator between remaining healthy and developing illness. Cigarette smoking, forced vital capacity (inversely), obesity and high serum uric acid were the next most important variables, followed by alcohol intake, serum glucose and triglyceride levels, and the number of years lived in Japan.

Physical activity, hours of sleep, coffee consumption and eating an Oriental diet were not associated with health or disease in this group; nor were social and demo-

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graphic factors important predictors of health. Separate analyses of occupation level, education, rural residence, marital status, religious preference and type of housing failed to uncover any association with disease status.

The latter findings are consistent with our earlier studies of social and cultural processes that are thought to be either stressful or protective against stress.[148, 160, 176] Using individual questions and summary scores of geographic mobility, social and cultural changes, acculturation and social support, we examined the association between the seven-year incidence of cardiovascular disease, cancer and all mortality among a subset of more than 4,500 men.

There were no significant associations with geographic mobility (migration and regional moves), or with the degree of social support individuals derived from friends, relatives and organizations. None of the other measures was associated with disease.

Discussion

The general results of these studies indicate that there are several biological and lifestyle variables associated with remaining healthy through late adult life among this group of men of Japanese ancestry. Of special importance is the fact that many of these factors can be changed, thus offering the opportunity for the prevention of major chronic diseases.

Obesity by itself and through its influence upon blood pressure, serum cholesterol, triglyceride and glucose is a good example of this, as are cigarette smoking and high alcohol intake. High blood pressure and high serum glucose levels can be treated early, thus preventing the onset of associated cardiovascular disease.

The general lack of an independent interrelationship between social and demographic characteristics in this study does not give full weight to the indirect importance of these variables in determining good health. It is quite possible that socio-economic status, occupation and education affect diet, obesity, alcohol and cigarette consumption. The years spent in Japan are a good example. We found that the men who were born in Japan, or went to school there, tended to score high on the scale of healthy characteristics. They ate a low-fat, high-carbohydrate diet, were more physically active, less obese and had lower serum cholesterol and glucose values.

Men who remain healthy throughout late adult years are remarkably different at middle age from the men who later develop major chronic disease. While these data relate to a single group of men of Japanese ancestry, we believe that they provide a realistic basis for reducing the burden of morbidity and mortality in the rapidly increasing elderly population of all ethnic groups.

TABLE 1.

Number of Cases and Incidence Rates of New Disease, Honolulu Heart Program, 1965-'80

Disease Group	Non-Fatal Disease	Fatal Disease	Total Disease	Incidence Rates/1,000*
CHD	236	88	324	64
Cancer	189	200	389	77
Stroke	133	37	170	34
Hypertension Only	908	—	909	180
Metabolic	487	1	488	97
Gastrointestinal	543	17	560	111
Respiratory	161	10	171	34
Other	94	161	251	50
Total Disease	3,437	514	-3,951	784
Total persons With disease	2,235	514	2,749	545
Total persons Without disease	2,292	—	2,292	455

*Population at risk = 5,041

TABLE 2.

Age-Adjusted Mean Values of Selected Risk Factors At Baseline Examination By Disease Status

Risk Factors	Healthy N = 2,292	Non-Healthy 2,749
Laboratory & Physical Factors		
Systolic B.P. (mmHg)	119.5	131.8***
Diastolic B.P. (mmHg)	74.6	81.4***
Body mass index (Kg/m²)	22.5	23.3**
Hematrocrit (%)	43.1	43.6
Serum Uric Acid (mg/dl)	5.6	5.9**
Serum Triglyceride (mg/dl)	194.2	231.4*
Serum Cholesterol (mg/dl)	210.7	212.9
Serum Glucose (mg/dl)	140.1	145.4*
Forced vital capacity/Ht	19.9	19.5**
Behavioral Factors		
Alcohol (oz/mo)	10.7	15.1*
Smoking (cigarette years)	394.9	485.6***
Physical Activity Index	32.5	32.2
Hours of Sleep per night	7.1	7.2
Japanese Diet Score	47.6	47.7
Coffee (cups/day)	3.4	3.3
Social Factors		
Age at 1st Marriage	26.3	25.9
Number of Siblings	4.8	4.7
Number of Children	2.9	2.9
Persons Per Room	1.4	1.4
Years in Japan	2.2	1.6**

* $p \leq 0.05$ From multivariate analysis.
** $p \leq 0.01$
*** $p \leq 0.001$

Osteoporosis Among Hawaii Japanese: A Review of the Major Findings of the Kuakini Osteoporosis Study

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Fracture incidence and prevalence in terms of multiple variables have been analyzed during a five-year, longitudinal study of 1,400 men and 1,200 women. Higher Bone Mineral Content (BMC) and lower fracture prevalence have been observed with use of estrogen and thiazide.

Prospective fracture risk prediction is also possible with BMC measurements. The os calcis *BMC proved to be the best predictor of fracture risk. Nearly 30% of women at age 50 already have increased fracture risk. The ability to predict fracture risk will be very useful in the planning of rational osteoporosis prevention programs.*

The ultimate, original goal of the longitudinal Kuakini Osteoporosis Study (KOS) was to determine individual fracture risk. The ability to assess future fracture risk in perimenopausal women would permit selective, rational preventive therapy to be used for those women with greater risk; this in turn could have significant impact upon fracture incidence and health care costs in subsequent years.

The relationship of BMC to skeletal strength is well known. It has been widely presumed that prediction of fracture risk at a given skeletal site would necessarily require direct BMC measurements of that site. However, since there had been no published comparisons of prospective fracture incidence with BMC when this study was initiated in 1980, it was elected to avoid any preconceived bias concerning which skeletal site BMC might be the best predictor of overall fracture risk.

Thus, multiple bone sites of varying cortical and trabecular content were chosen, some weight-bearing, some non-weight-bearing. These included proximal radius, proximal ulna, extreme distal radius, extreme distal ulna, central calcaneus, and the lumbar spine L1-L4.

Study Design

The study design required BMC measurements of maximum precision, since individual bone loss rates as low as 0.5 to 2% per year were being assessed. It was thus decided to use a modification of the rectilinear, photon absorptiometric technique that was used during the NASA Apollo and Skylab programs.[A28]

The rectilinear scan of the extreme distal radius and ulna starts at approximately 1 cm proximal to the ulnar styloid; at this location the radius contains approximately 50% trabecular bone. A proximal scan of the mid-shaft radius is obtained at the junction of the distal and middle one-third of ulna length; the radius is virtually all cortical bone at this site.

The *os calcis* measurement includes 12 scan rows, each 3 mm in width, beginning 6 mm from the bottom of the heel. The resulting image of the heel permits exact duplication of the central 2.7 cm of the *os calcis,* where the minimal mineral content has been observed and where the greatest lability of BMC has been documented.[A17] This technique allows for very exact repositioning on serial measurements — necessary for high precision — and was used for all skeletal sites except lumbar spine; a rectilinear dual photon scanner was used to measure lumbar spine BMC.[A37]

The use of the *os calcis* measurement site is unique for this type of study. As a wholly trabecular weight-bearing bone, it was the most sensitive indicator of weightlessness in NASA studies.[A21] Despite a small cadaver study suggesting a poor correlation between *os calcis* and spine,[A5] there are solid data that indicate otherwise. Adams et al.[A26] reported a correlation of 0.94 between calcaneus and spine; Chalmers[A19] also reported significant correlation.

More recently, Schneider et al.[A23] reported a 0.83 correlation between *os calcis* and spine in cadaver bones. Evans et al. reported a 0.72 correlation between *os calcis* and spine using a technique identical to ours.[A38]

Although these data do suggest a good parallel between trabecular bone in the *os calcis* and the spine, the ultimate clinical choice of a measurement site is dependent upon the ability of that measurement to predict future fracture risk.

As of April 1985, the longitudinal bone loss rate data had not yet been analyzed. Thus, with one exception, the bone mineral results discussed below represent cross-sectional analyses. However, there were sufficient fractures during the study to permit statistically significant comparisons between fracture incidence and initial BMC, as discussed below.

Results of Cross-Sectional Analyses

1 — The first data showing a beneficial effect of thiazide diuretics upon bone mineral content was published in 1983.[163] Among the 1,368 men in the cohort, 323 were taking thiazides for hypertension.

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These men had significantly more mineral content at all five skeletal measurement sites than did non-users of thiazide. Untreated hypertensive patients and persons without hypertension had comparable BMC, indicating that the higher BMC among thiazide users was related to the drug and not to the underlying hypertension.

A subsequent analysis of 993 postmenopausal women, taking into account estrogen status, also confirmed the positive effects of thiazide upon BMC at all skeletal sites.[164] However, estrogen had a greater positive effect upon BMC than did thiazide, and women taking both estrogen and thiazide had the highest BMC levels. The effect of the two drugs appeared to be additive.

In addition, the prevalence of non-spine fractures among both thiazide and estrogen users was about one-half that of the non-users; users of both drugs had only 17% as many fractures. These findings support a role for thiazides in osteoporosis, especially in its preventive management.

2 — Positive effects of exercise upon BMC were confirmed, but the effects were weaker than those of age, estrogen use, or thiazide use. In a separate study not involving the cohort population, a group of 20 male runners, with no prior running experience, had *os calcis* BMC measured at the beginning and the end of a nine-month marathon training program. Consistent runners showed a significant increase in BMC compared to controls.[196]

3 — Analyses of 34 dietary variables showed that ingestion of milk, calcium, and vitamin D were significantly and positively associated with BMC in both sexes after adjusting for age, weight, height, strenuous exercise (men), history of nonviolent fracture, thiazide use, and estrogen use (women). However, the independent contributions of various nutrients to BMC were only modest as compared with those of major confounders.[187]

The dietary analyses have also provided intriguing new data relating magnesium intake to spine fracture. Magnesium intake was significantly lower among women with spine fracture on X-ray. These women also had significantly lower intake of vegetable protein, but a higher consumption of animal protein. Although these data are cross-sectional, they suggest a potential role for magnesium in the maintenance of skeletal strength.

4 — Considerable data has been published comparing BMC measurements (or ash weights) at one skeletal site to BMC at another site. Since our ultimate clinical goal is to predict fracture risk at all potential fracture sites, the clinical relevance of these inter-site BMC comparisons is open to question.

We are, nevertheless, including some BMC comparisons between skeletal sites (See Table 1) primarily because they contradict some older data that were based upon limited sample volumes of a small number of cadaver bones.

TABLE 1.
Correlation Coefficients Between Skeletal Sites

	L1	L2	L3	L4	L1-4
L1	1.000	0.921	0.881	0.812	0.937
L2	0.921	1.000	0.926	0.856	0.961
L3	0.881	0.926	1.000	0.902	0.972
L4	0.812	0.856	0.902	1.000	0.943
L1-4	0.937	0.961	0.972	0.943	1.000
		Heel	**D.R.**	**P.R.**	**L1-4**
Heel	1.000	0.712	0.688	0.770	
Distal Radius	0.712	1.000	0.812	0.663	
Proximal Radius	0.688	0.812	1.000	0.701	
L1-L4	0.770	0.663	0.701	1.000	

n appendicular = 900
n spine = 746

Moderate correlations do exist between all bones. Of particular interest is the lack of uniformity within the lumbar spine; L1 relates to L4 with a correlation coefficient of 0.812. The *os calcis* relates almost as well to the lumbar spine as a whole, with $r = 0.77$. Thus, to the extent that these correlations prove to have clinical relevance, these findings indicate that truly trabecular BMC in the appendicular bones does reflect the mineral content of the axial skeleton.

Body weight is also related to BMC of weight-bearing bones *(os calcis* and spine). Both are weight-related to a similar degree; $r = 0.42$ for spine and $r = 0.49$ for *os calcis*. This is consistent with the observation that obese women have a lower fracture incidence.

5 — *Os calcis* BMC was found to be just as good as lumbar spine BMC as an indicator of vertebral osteoporosis, based on radiological findings. Subjects classified as grade 1 (evidence of vertebral demineralization without fracture) had spine and *os calcis* bone mineral values that were indistinguishable from those with grade 2 or 3 findings (presence of one or more vertebral fractures).

Subjects in the grade 0 category (no evidence of demineralization or fractures) had higher spine and *os calcis* BMC than those in grades 1, 2 or 3. Interestingly, there was very little decrease in spine or *os calcis* BMC with age for the grade 0 category, whereas a consistent decrease in BMC with age was observed for grades 1, 2 and 3.

Distal and proximal radius BMC decreased starting around age 40 for all categories — grades 0, 1, 2 and 3. Again, grades 1, 2 and 3 were virtually identical with respect to BMC, and had lower BMC values than the grade 0 group, but the difference compared to the grade 0 group was not as pronounced as that observed for spine and *os calcis* BMC.

These data suggest that there may be a group of individuals who do not lose large amounts of trabecular bone as they age, since the grade 0 group showed little change in BMC of the predominantly trabecular *os calcis* and of the spine. On the other hand, there appears to be another group of individuals who lose trabecular bone very rapidly, since a sudden separation between BMC of grade 0 and grades 1 through 3 appeared around age 50 (the average age of menopause was 49) for the *os calcis* and spine sites (primarily trabecular bone), but not for the radial sites (mostly cortical).

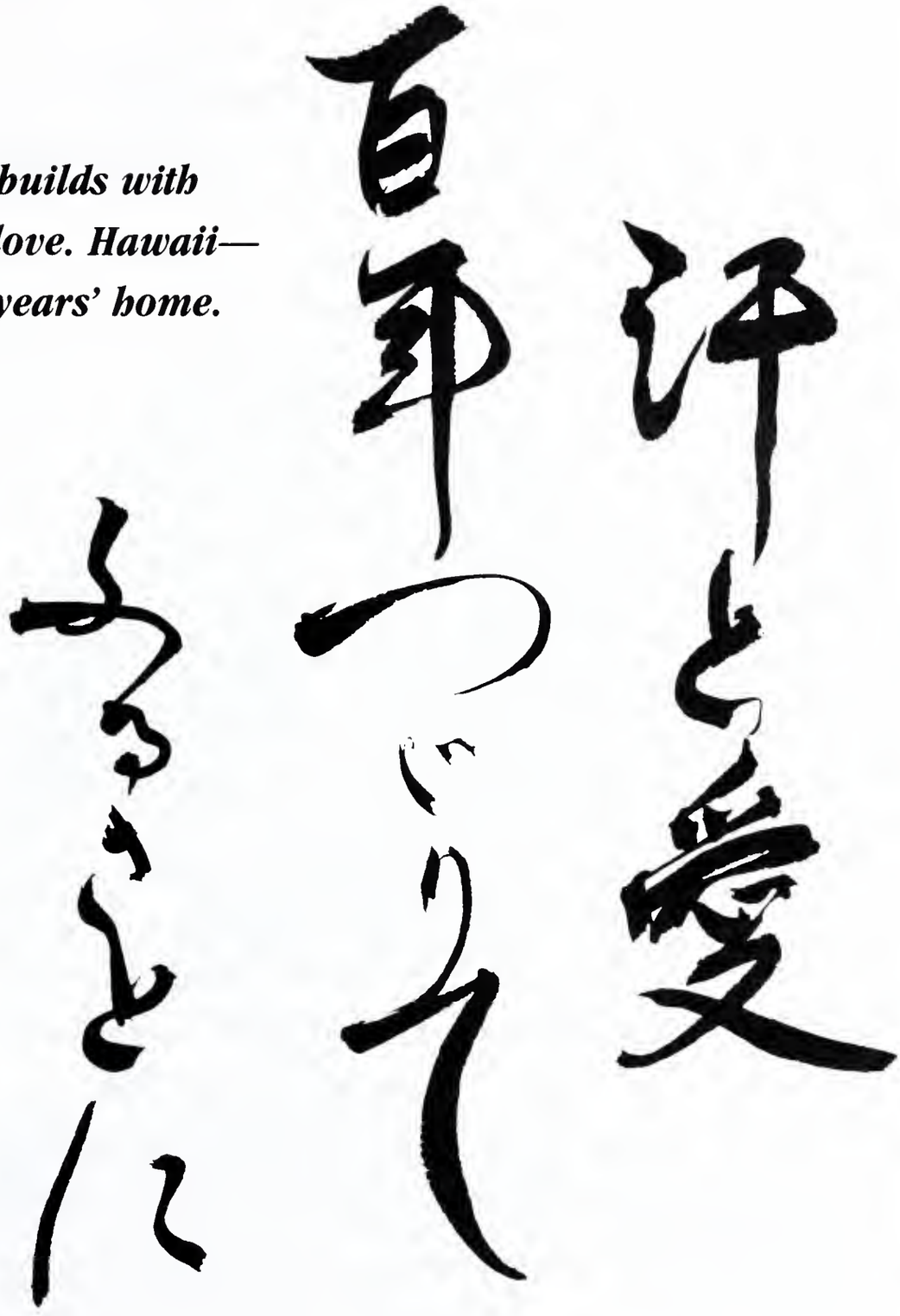
It is also apparent that BMC measurements of one site *(os calcis)* accurately reflect the degree of osteoporosis at another site (lumbar spine). Thus, the relative ease and accessibility of *os calcis* for BMC measurements make it a logical choice for vertebral osteoporosis screening.

Most importantly, however, the data indicate that it is possible to diagnose pre-fracture, or "asymptomatic," osteoporosis of the spine (grade 1), using bone mineral measurements. Since BMC is a continuum, rather than a discrete variable (as is the grade of osteoporosis), it is also possible to identify those individuals who are approaching the pre-fracture stage, so that appropriate treatment can be initiated.

Prospective Fracture Incidence Data

Although skeletal strength has been shown to be related to BMC *in vitro,* as of 1984 there were minimal data in the literature relating BMC prospectively to fracture incidence. The original aim of the Kuakini Osteoporosis Study was to

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evaluate methods of identifying individuals at greatest risk for osteoporosis, and who thus could benefit most from preventive treatment. In fact, the NIH Consensus Development Conference on Osteoporosis in 1984 concluded that "there are no laboratory tests for defining persons at risk or those with mild osteoporosis."[A39]

That statement is no longer true; KOS data presented and published during 1985 shows significantly increased risk of fracture, based upon prospective incidence data, with diminishing quintiles of BMC. Subjects in the lowest quintile of *os calcis* BMC have a non-spine fracture risk 10 times greater than subjects in the highest BMC quintile.[197, 199] The data also indicate that the *os calcis,* a bone which has received little attention except during NASA's Apollo and Skylab experiments, is the optimal skeletal measurement site for prediction of fracture risk.

The ability to predict future fracture risk has considerable implications for the preventive management of osteoporosis. It is now possible, from a single BMC measurement, to estimate the actual level of risk. It is also possible to project, with knowledge of bone loss rates, at what age a woman's fracture risk will double. This in turn means that the level of treatment required to reduce fracture risk during her lifetime can actually be quantified, and the level of treatment can be appropriately matched to her level of risk.

The availability of risk data also permits a new, more sensitive definition of osteoporosis. Rather than depending upon crude comparisons of an individual with fractures to others in her or his age group, many of whom also have low BMC, anyone with a relative fracture risk of two or more could be identified as osteoporotic. Based upon this definition, 15% of women at age 40 and 30% of women at age 50 are already osteoporotic and at significantly greater risk for fractures.

This concept is also supported by our BMC data, which shows that trabecular bone loss begins as early as age 35 to 40 in some individuals. How much of this early bone loss is related to surgical menopause is not yet determined. However, fewer than 4% of our women under age 50 have had surgical menopause.

Thus, the premenopausal years must receive greater attention if osteoporosis prevention is to be successful. Earlier screening of BMC in these women is appropriate, and initiation of higher calcium intake and higher physical activity levels are probably indicated as a general, public health measure. However, our data indicates that this would be grossly insufficient treatment for the highest-risk individuals.

Following menopause, those women already known to be at risk premenopausally should receive more potent preventive treatment, which in most high-risk women will include cyclic estrogen replacement. Such women should also be closely monitored, especially during the immediate postmenopausal years. If bone loss continues despite estrogen replacement, more aggressive diagnostic and therapeutic measures are indicated.

The study has also developed criteria by which various BMC measurement techniques can be objectively evaluated.[198] These criteria are dependent upon the specific, intended clinical use:

1 — For routine screening of women to predict fracture risk, the primary requirement is ability to predict risk, based upon prospective fracture incidence data. Secondary criteria include cost, ease of performance, radiation exposure, and frequency of artifacts. Of the six skeletal sites tested — lumbar spine, distal radius, distal ulna, proximal radius, proximal ulna, and *os calcis* — *os calcis* proved to be optimal.

2 — For monitoring of treatment in women already known to be osteoporotic, the requirements may be different. It may be necessary to measure those portions of the skeleton most affected by the treatment in question. For example, there is growing concern that BMC in the femoral head may decrease during fluoride therapy even as spinal bone increases.[A24, A25, A40] Thus, it may be necessary to monitor the sites in question directly.

Although the trabecular *os calcis* shows a high correlation with spinal BMC, no such data is yet available for the femoral head. High precision is also an important requirement for a monitoring technique. If we are to attempt measuring changes in bone loss rate of the order of 0.5% to 1%, extremely high precision is essential.

Our data indicate that the proximal radius and *os calcis,* as measured by single photon absorptiometry, have the greatest precision. The *os calcis* is most useful because of its high trabecular content, the proximal radius being virtually all cortical bone.

The Honolulu Heart Program

(Continued from page 300)

cantly and inversely related to CHD incidence even after allowing for major risk factors.[105]

More detailed data on psycho-social variables were obtained by an acculturation questionnaire from approximately 4,600 men in 1971, and by a Jenkins Activity Survey questionnaire for Type A behavior from approximately 2,400 men in 1970.

The relationships of acculturation, social support and Type A behavior pattern to CHD prevalence and incidence were evaluated on the basis of these data.[93, 148, 160] These studies showed that Japanese men who were more Westernized, who had lower levels of social networks or who had Type A personality were more likely to have existing CHD. However, these associations were not found or were less evident in predicting the incidence of CHD.

The analysis of psycho-social factors was extended to testing the hypothesis of general susceptibility to chronic disease as a unifying explanation for the findings that a variety of diseases are associated with certain social and cultural situations. The incidence of CHD, stroke, cancer and all deaths during the period December 1971 to January 1979 was analyzed for its association with individual questions and five summary scores measuring geographic and generational mobility, socio-cultural and spousal incongruity and social networks.[176]

Among all the questions and summary scores that measured mobility and incongruity, there was only one statistically significant association with any disease, and this association was in the opposite direction to that predicted by the hypothesis. The measurement of social networks showed an inverse association with CHD, but not with stroke, cancer or all deaths.

There was no evidence to support the hypothesis that social networks are especially protective among persons in the highest levels of stressful processes in terms of mobility and incongruity.

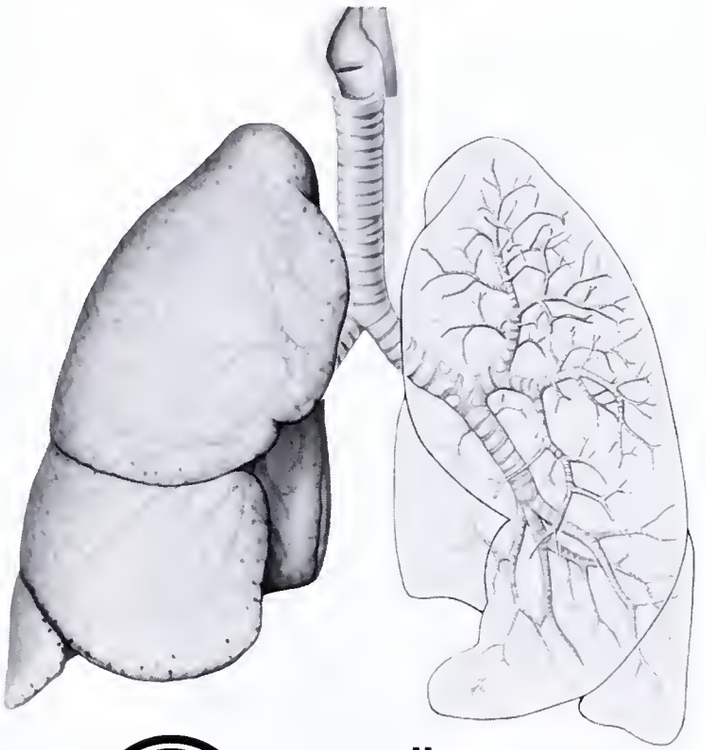
Future Plans

Survivors among the HHP cohort are now from 65 to 85 years old. Cardiovascular morbidity and mortality in this aging population will rapidly increase in the coming years. Future studies will include the natural history and the determinants of the prognosis for type-specific CHD and stroke, the relationship of various antecedent risk factors to necropsy findings, especially atherosclerotic lesions of the heart, brain, kidneys and great vessels, secular trends in the incidence and case fatality of CHD and stroke and differential effects of risk factors upon early onset and late onset of CHD and stroke.

A new project will be developed based on the analysis of pulmonary function data obtained at three successive examinations of HHP during 1965-'75, with respect to their correlates and predictive values for subsequent morbidity and mortailty from cardiovascular, respiratory and other chronic diseases.

Also being planned, in collaboration with other investigators, is an epidemiologic investigation of senile dementia.

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Brief Summary Consult the package literature for prescribing information

Indications and Usage: Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae), Haemophilus influenzae* and *S. pyogenes* (group A beta-hemolytic streptococci).

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor.

Contraindication: Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

Warnings: IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY. THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES.

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy, particularly to drugs.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions: *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — *Pregnancy Category B* — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor® (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions: Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note: Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

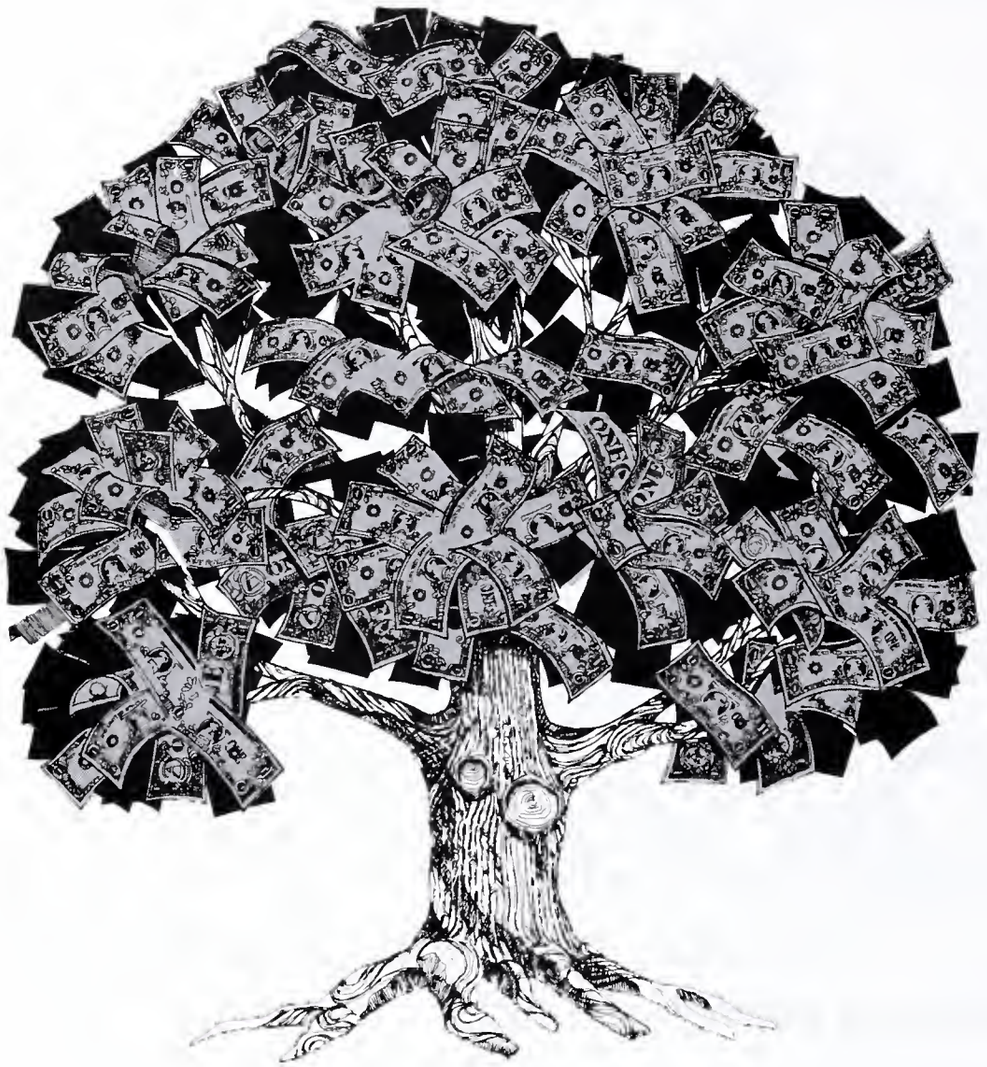
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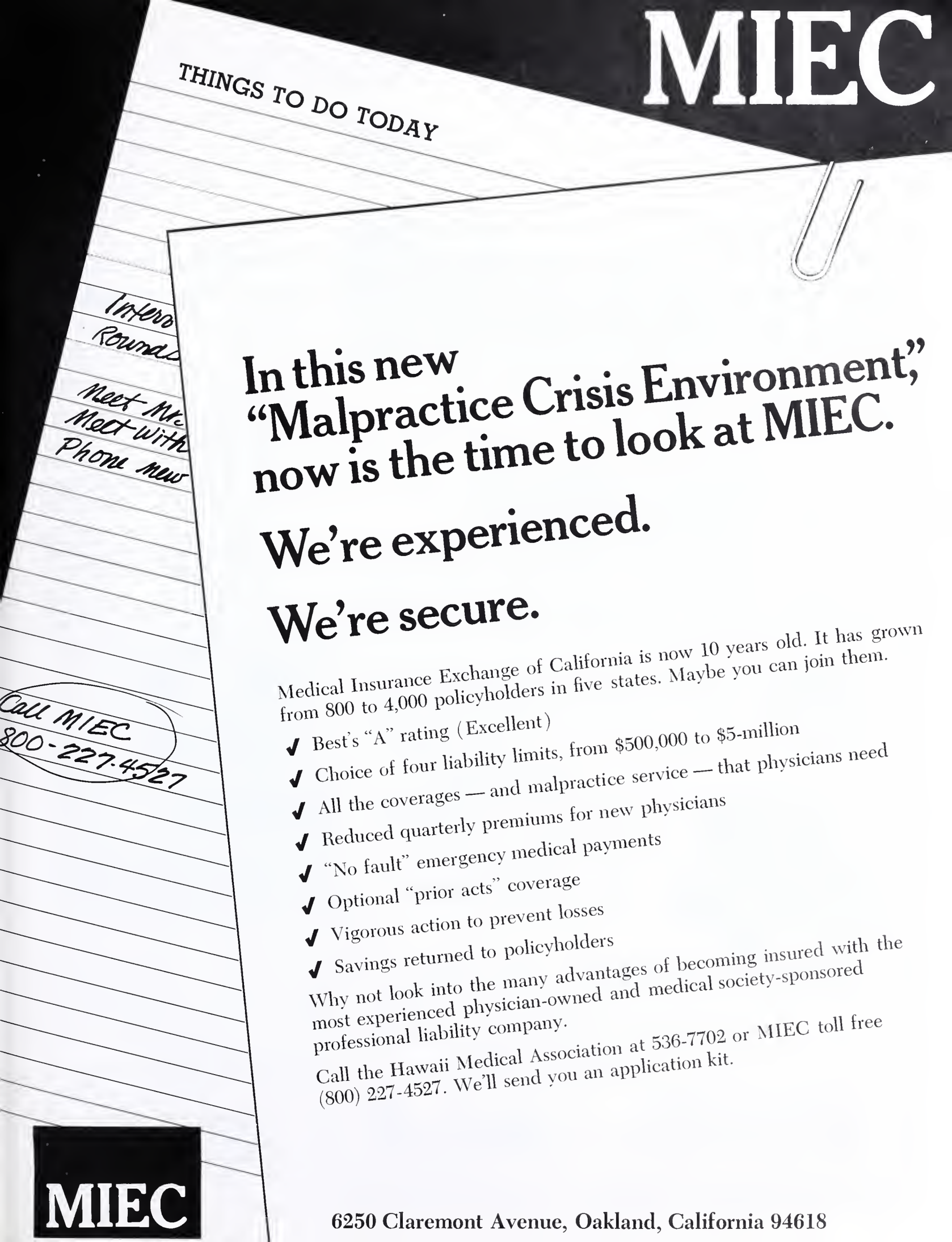


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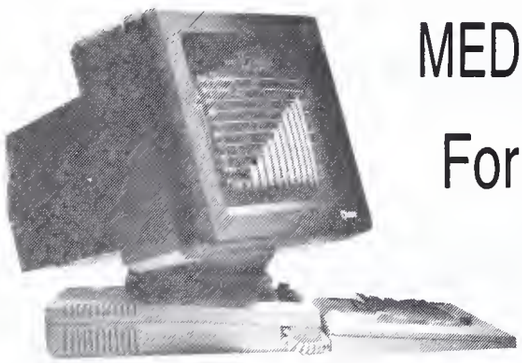
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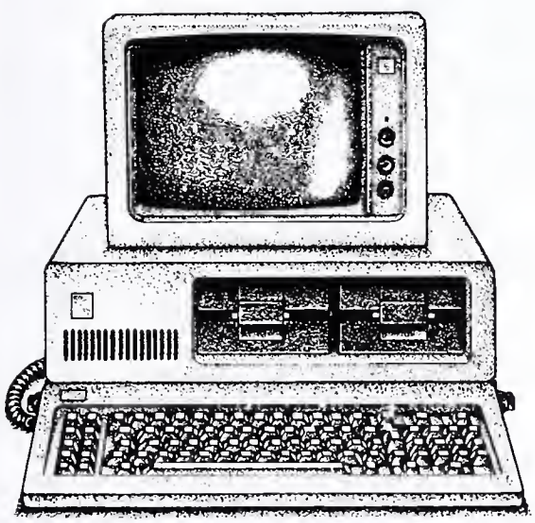
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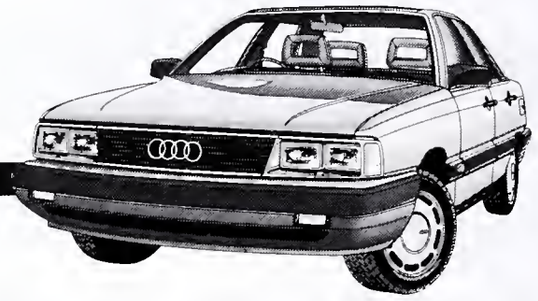
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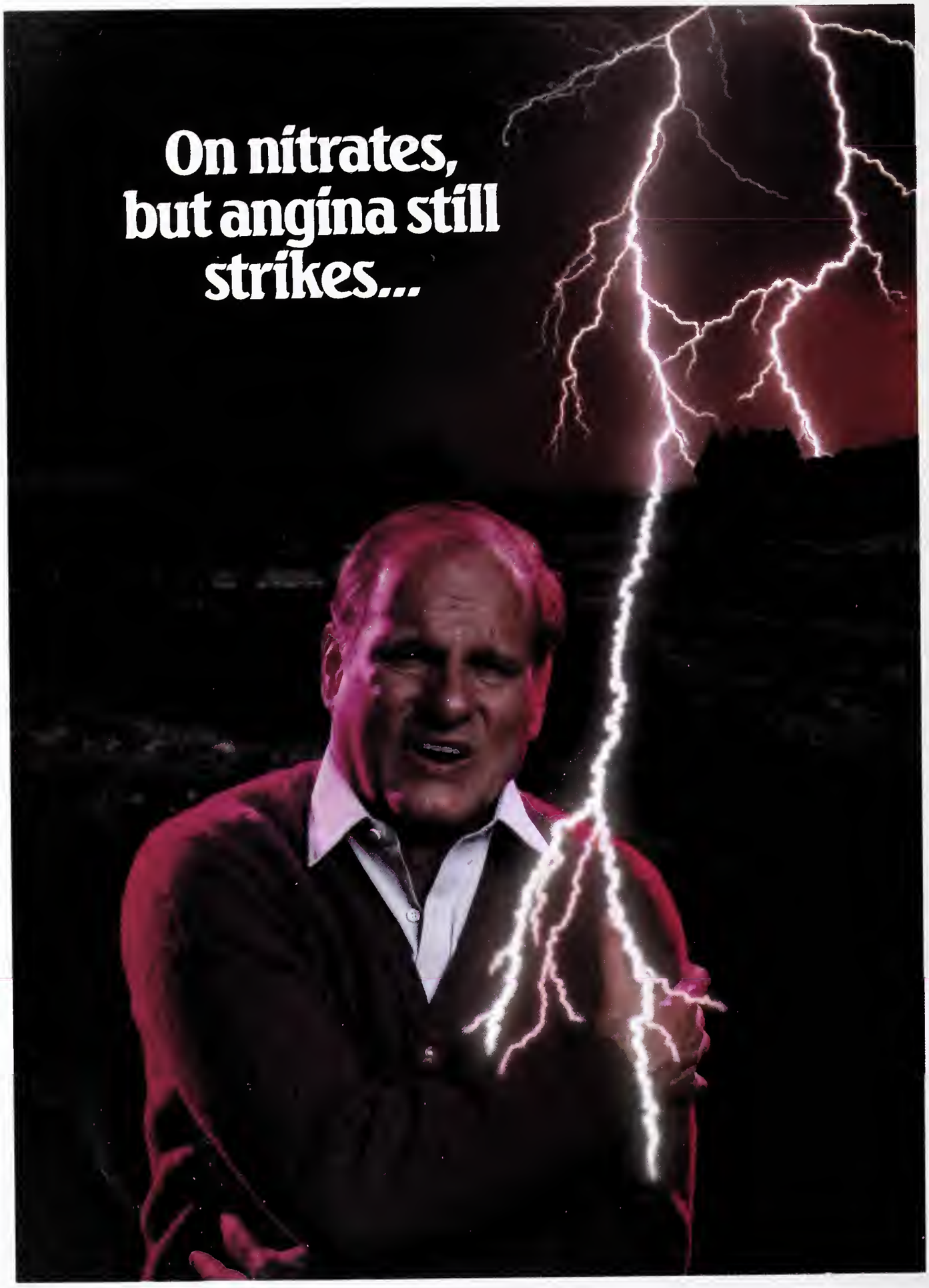
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Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C:* There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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CONTENTS

Editorials: 334
A Proposed Tri-Hospital HMO or PPO
J.I. Frederick Reppun, MD
This is My Mana'o
Auditing Hospital Bills
J.I. Frederick Reppun, MD

Letters to The Editor: 336
Re: Friends of the Medical School
John A. Breinich
Re: Cost Containment and Quality of Medical Care
Paul E. Bogden, MD
Re: Malpractice Insurance Article
Bruce B. Chrisman, MD

A More Cost-Effective Evaluation of Syncope
Paul E. Bogden, MD

Biography 344
Hing Biu Luke, MD — 50 Years and Still Practicing
J.I. Frederick Reppun, MD

Health Care Marketing 345
William G. Dodge Jr.

Book Review 349
George H. Mills, MD

Over The Editor's Desk 350
J.I. Frederick Reppun

Medical Economics, Health Care Costs/Financing Hawaii, 1985 352
C.J. Tupper, MD

From The Kahuna Lapa'au 358

Continuing Medical Education 360

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WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.
BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS:
General: Give with caution to patients with impaired renal or hepatic function, possible folate deficiency and severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur, frequently dose-related.
Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.
Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.
Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis:* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination, concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility:* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).** *Hematologic:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).
STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT.
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A Proposed Tri-Hospital HMO or PPO

About 250 physicians were called together at 5:30 p.m. on May 14 at the St. Francis Hospital auditorium by the chiefs of staff of Kapiolani Women's and Children's Medical Center, Kuakini Medical Center and St. Francis Hospital to consider forming an organization in the nature of an HMO or a PPO. Clifford Chang, MD, chief of staff of St. Francis, chaired the meeting.

Albert Chun-Hoon, MD, medical director of HMSA, was the first speaker; he was followed by HMSA President Marvin Hall. KMC President Masaichi Tasaka added a few closing remarks.

Chun-Hoon introduced the subject from a historical point of view.

The current interest and concern stem from the profession's problems in the highly competitive medical "marketplace," compounded by an alleged oversupply of physicians and by increasing governmental regulation focused on controlling the escalating cost of medical care.

The prototype of a Health Maintenance Organization (HMO) in our community is the Kaiser Health Plan, the salient elements of which are a closed panel of providers plus outside contracted services, a prepaid capitation fee from subscribers, and an emphasis on preventive medicine geared to controlled use of facilities and hospitalization.

Of historic interest to us is the remembrance of the sugar and pineapple plantation type of medical practice — the earliest "HMO," in fact — and then the abrupt conversion in 1949 or 1950 when the pineapple plantations on Molokai switched over to a capitation fee system under HMSA. At Libby McNeil & Libby's Maunaloa plantation, instead of being on salary/retainer, we physicians were paid 25 cents per employee per month, no matter whether that employee came to see the doctor every day or not at all. The plantation owner was "off the hook" and had no further concern over what the doctor ordered in or out of hospital, except that the plantation still ran the hospital — and charged expenses to HMSA on a contract basis. This plan did not last long, primarily because HMSA had no previous actuarial experience upon which to base its rates.

The Preferred Provider Organization (PPO) is an offshoot of the HMO; its providers offer discounted services but can be reimbursed on a fee-for-service basis. A PPO also thrives on a minimum of expensive hospitalization and also if consultations with outside physicians are kept to a minimum. These "incentives" make for a higher income, or "bonus," to the participating physicians.

The Western Conference of Prepaid Plans now includes 142 member organizations, of which HMSA is one. Nationally, it is reported that close to 30% of the population has signed up for one or the other of several such plans in this country.

The first such plan was the Blue Cross of Texas, originating in 1929 under the auspices of schoolteachers. Here in Hawaii, HMSA was born in 1938 as a result of a conference in 1935 of territorial social workers, teachers and nurses. This was spearheaded by Mary Catton, Hawaii's first accredited social worker, now deceased. In support, the physicians of the Territory of Hawaii withheld 10% of their fees in order to fund the embryonic organization. Little did they imagine that it would grow to a current subscriber list of 550,000, or 60% of the population of these Islands.

The Kaiser Plan originated also in 1938 in California as a company plan; it came into being here in Hawaii more than 25 years ago and it now has 125,000 subscribers, or 14% of the population. Medicare/Medicaid covers 22% of the population, leaving about 4% who have coverage under other insurance carriers or have no coverage.

It was interesting to learn from Chun-Hoon that of 17,000 employer groups in Hawaii, only 300 have more than 50 employees, an indication that this is indeed a "small business" state.

HMSA's administrative costs consume only 5% of the income from premiums, one of the lowest figures among the nation's health plans. This indicates that any new entity entering the field here will have one tough time competing with HMSA.

Eighty percent of the practicing physicians in Hawaii are "PARS" — participating and accepting discounted fees, which makes HMSA "a giant PPO," as Chun-Hoon puts it. Most of the "Non-PARS" in the 20% remaining increment participate in the competing "Island Care" PPO that takes in the Kauai Medical Group and the Honolulu Medical Group physicians and their patients.

HMSA embodies the time-honored principles of free choice of physician and hospital, and fee-for-service. Its Plan 4 covers 510,000 people, or 90% of HMSA's subscribers. "Here is the indication that the public has made its choice," said Chun-Hoon, adding that the system is in jeopardy, nevertheless, as a result of the current fluid forces in the medical marketplace.

This impressive depiction of *our* 47-year-old PPO was complemented by the remarks that followed, coming from Marvin Hall, HMSA's new president, who has come up through the ranks of that organization.

"Ten percent of HMSA's subscribers," said Hall, "are in a sub-HMO called the Community Health Program (CHIP) that is 12 years old and includes 40,000 members; it is served by a closed panel of providers. Health Plan Hawaii (HPH) is the very newest within the HMSA structure. HMSA's enrollment is the third-largest of any state in the union, after Rhode Island and Massachusetts."

Hall revealed some additional significant facts: In-hospital days here in Hawaii are the lowest in the nation, at 40% of the national average length of stay; the latter figure stands at 6,675 days per 1,000 population, or a ratio of 6.675. In Hawaii, the figures are 273 per 1,000, or a ratio of 0.273. The impact of DRGs this past year has reduced this ratio even further. "It is difficult to imagine any PPO coming in from the Mainland," said Hall, "able to match this local experience." He went on to explain that any such newcomer, in order to be competitive and to attract subscribers away from HMSA, would have to be much tougher with its Utilization Review (UR), reduce its administrative costs drastically, and lower its premium rates as well.

"It is not likely that HMSA will see 100,000 of its subscribers 'defect' to any newcomer," said Hall. "Nor will HMSA place itself in a position of subsidizing its competitors by allowing its PARS physicians to join any other such plan and discount their charges even further," he emphasized pointedly. However, in the "new" marketplace, HMSA is prepared to offer a physician- or hospital-based plan, such as the contemplated tri-hospital plan herewith.

Masaichi Tasaka, representing the administrations of the three hospitals (Sister Maureen and Richard Davi were both present), reminded the audience that the pressures being exerted by powerful Mainland business corporations and by the government were what prompted this exploration of physician sentiment from among the medical/dental staffs of the three hospitals. He gave the primary reason as being the need to compete with Kaiser, which was expected to grow in a very favorable milieu. "The feds are pushing hard for HMOs as a way to cut health care costs," he said. It would be up to the signatories on the "memorandum of intent" on slips passed out to every member of the large audience filling the auditorium to decide whether the

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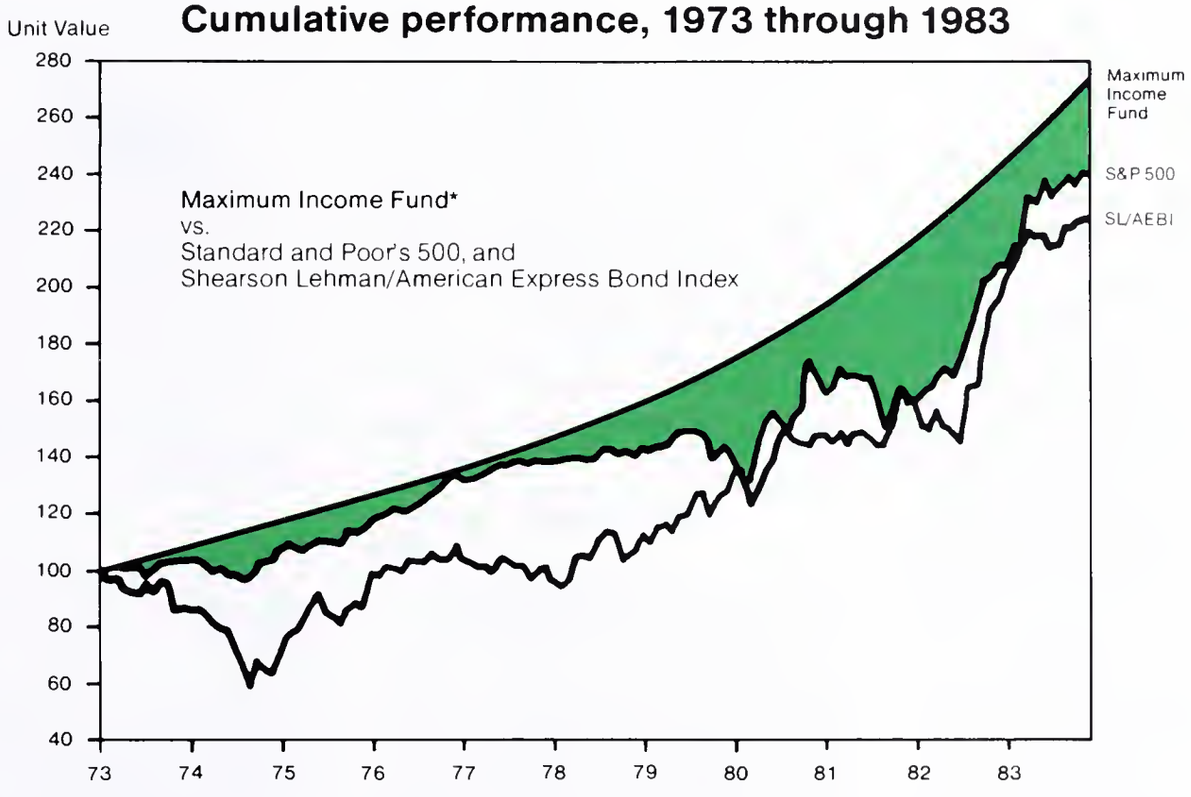
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(Continued from page 334)

concept should include fee-for-service or capitation provisions.

* * *

Your reporter had to leave before the ensuing question-and-answer period took place. As he departed, he handed in this question: "It is traditional and a medical ethic, that a physician *not* serve two masters. Will it be ethical for physicians who sign up for HMOs or PPOs to have a pecuniary interest in the plan?"

We await the answer and we encourage comment via the pages of your JOURNAL.

J.I. Frederick Reppun, MD

This is My Mana'o

Twenty-five percent of all hospitals in the United States are associated with HMOs; and there are some 300 PPOs in existence, sayeth the AMA, as presented to the HMA Council at its June 7 meeting by President Bill Hindle.

What is the difference between an HMO and a PPO? The AMA's "glossary of terms" has it:

> PREFERRED PROVIDER ORGANIZATION (PPO) — a payment arrangement whereby insurers contract with hospitals or physicians on a negotiated fee-for-service basis to provide health care services. Enrollees can select any health care provider, but they are given an economic incentive to use these "preferred" hospitals and physicians. In 1984, the AHA reported that there were 115 operational PPOs and at least 11 more in the planning stage. California, with 44, has more PPOs than any other state.
>
> HEALTH MAINTENANCE ORGANIZATION (HMO) — a prepaid health care plan that combines the delivery and financing of comprehensive health care services. A subscriber's fees are fixed regardless of how much service the HMO provides. To control costs, HMOs emphasize the use of outpatient services and patient education and closely monitor utilization of inpatient care. The 1984 National HMO Census by Interstudy, Excelsior, Minn., reported 310 operational HMOs, with more than 15 million members.

"Our" building — 320 Ward Ave. — has been sold on terms satisfactory to HMA, which may continue to stay here as renters rather than owners.

And . . . HMA has made a deposit on a new site, again on very favorable terms. President Hindle will reveal details to the membership in due course (probably long before this is published). The old "Dang Plan" members who embarked on an HMA-saving venture some 10 years ago, lending their money at no interest, may take pride in the fact that somewhat more than $300,000 so contributed will allow HMA to proceed with the new project forthwith. So . . . dear Dang planners, *kokua* a bit longer and leave your long-forgotten dollars in, please!

Dick Wasnich, at Kuakini Medical Center, has been singled out for his work on osteoporosis by the government. The awards and honors were shared by only one other researcher in the country — the Mayo Clinic.

"Bitching about batching" is how Russ Stodd labeled Sakae Uehara's problem with Medicare and Medicaid. HCFA has compressed — in CPT-4 — four subentities of a surgical procedure, e.g., or variations, each formerly with a conversion factor of its own, into three. The arbitrary regulation has been called "batching," facetiously, you think? Far from it; it is for real! This means the options for charges have been reduced to the lowest three.

The council did not favor a member's proposal, seeking HMA endorsement, to itemize on his statement of charges to his patients the amount ascribed to pay for his MMPI. However, the council encouraged the proposer to pursue his options, pointing out that it is not likely that third parties will pay "surcharges," and "pars" physicians may not bill the subscriber for it as such.

It is my mana'o that a footnote on the bill may tell the patient that "n%" of the charge is his prorated share of the doctor's fee that the latter must pay his or her insurer.

J.I. Frederick Reppun, MD
Editor

Auditing Hospital Bills

HMSA's *Professional UPDATE,* Spring 1985 issue, reports revised coverage codes 23, 24 (effective Jan. 1, 1985), labeled Member Self-Audit of Inpatient Hospital Bills, that should give us practicing physicians an idea on how to contain costs without reducing quality of care.

HMSA offers to its subscribers who become hospitalized "50% of the money recovered from the Eligible Charge (whatever that means!*/Ed)* of the identified errors," i.e. the errors that amount to $40 or more. The maximum a member can receive from this source in a year is $1,000.

There have been reports in the media, both professional and lay, about the not infrequent overcharges by hospitals "in error" (?).

We suggest that inpatients ask hospitals to send the admitting physician a copy of the itemized initial statement only, or that hospitals do so on a routine basis as an internal audit, but not only for that reason — it can be a method of utilization review in which it is directly called to the attending's knowledge the cost of the various tests and procedures he ordered for the patient. There are other routes through which this can be done; in the day and age of computerized billing, to run off an extra copy is no big thing.

An odium for the physician? Yes, but not that onerous. Perhaps HMSA could be persuaded to give the attending the reward, should he be the one to find the "eligible" overcharges.

Carry it a step further: Have the patient bring the managing physician the whole ball of wax — the bills from the entire team — the patient's PMD will soon get an idea of how much it costs to bring in consultants, too!

J.I. Frederick Reppun, MD
Editor



Re: Friends of the Medical School

Editor:

I would like to thank you for your fine editorial in the July issue of HAWAII MEDICAL JOURNAL concerning the Friends of the Medical School. The Friends has been working quietly since the beginning of the Medical School to help with programs and activities. The specific activities of the Friends include:

1. Operate the Medical School Shop at the Biomedical Building at UH to sell medical books to students, physicians and others.
2. Donate money to the Student Loan Fund.
3. Support special projects of the school such as the computer-assisted instruction program.
4. Donate medical books to libraries, including the School of Public Health Library, Kapiolani Women's & Children's Medical Center and Hawaii Medical Library.
5. Support programs such as the "Body Talk" series on PBS-TV.

The Friends of the Medical School is currently trying to increase membership and public awareness of this voluntary group. Members of the medical community can show their support of the School of Medicine by joining the Friends for $10 a year in dues and any other tax-deductible contribution they would like to make. They can also take advantage of the services of the Medical School Shop when they want to order a medical book by calling 948-6638. Checks should be made out to the Friends of the Medical School, 1960 East-West Road, Honolulu, Hawaii 96822.

Thank you for helping to bring the Friends of the Medical School to the attention of the medical community.

John A. Breinich, President
Friends of the Medical School

Re: Cost Containment & Quality of Medical Care

Editor:

I read with great interest your editorials in the January (1985) HAWAII MEDICAL JOURNAL regarding cost containment and quality of medical care. Although your points are well taken, I believe that quality medical care is consistent with a policy of cost moderation. The enclosed "Code of Cost Moderation" from the Sacramento County Medical Society is an example of specific measures that physicians can take in order to maximize the quality of care while minimizing costs. It is time that we in Hawaii developed positive guidelines of this sort for our own community!

Paul E. Bogden, MD
Director of Medical Resident Education
The Queen's Medical Center

Associate Program Director
University of Hawaii Integrated Medical Residency Program

Response

It feels good to have a response from Dr. Paul Bogden, who is the Director of Medical Residency Education (DMRE) at Queen's. (In fact, it feels very good to discover that the JOURNAL is being read!)

Dr. Bogden's point is not only well taken, but it has come to be absolutely necessary that physicians be aware of the cost of, and frugal with their orders for, either diagnostic or therapeutic modalities in-hospital.

Our January editorial was intended to weigh carefully the balance between quality care and cost control, primarily in favor of the former.

Dr. Bogden's and the readers' attention is directed to the article in this issue by C.J. Tupper, MD, on this very subject. Dr. Tupper spoke at the Queen's Medical Center in March of this year.

Below we reproduce the Sacramento County Medical Society's "Code of Cost Moderation" supplied by Dr. Bogden.

J.I. Frederick Reppun, MD
Editor, HAWAII MEDICAL JOURNAL

Sacramento County Medical Society

PHYSICIANS CODE OF COST MODERATION

Preamble: Quality medical care to the patient is the physician's first commitment. In exercising prudence in delivery of this care, the physician prevents unnecessary expenditures for his patients. Just as the physician is best able to decide the best quality of care of his patients, so, too, should he be aware of the costs of such care.

Article I: Become conscious of and attentive to your patient's hospital cost and ancillary charges.

Article II: Delivery of care is best served for most patients in the physician's office, or on a hospital out-patient basis. Discourage use of emergency room facilities as out-patient non-emergency care centers.

Article III: Admit patients to hospitals when necessary without insurance coverage being an influencing factor.

Article IV: Order laboratory and radiology tests not only with deliberation but, when necessary, with consultations with pathologists and radiologists. Never order studies at the request or whim of the patient unless medically indicated for quality care.

Article V: Initially order drugs in limited quantities until efficacy of the drug is established.

Article VI: Discharge patients on the basis of optimum care with consideration of daily hospital discharge time. Participate in discharge planning.

Article VII: Do not discharge patients at the patient's convenience or be coerced by family to keep the patient hospitalized.

Article VIII: Admit patients to coincide with usual hospital charge day and not late in the week if the patient will not benefit from weekend hospitalization.

Article IX: Make every effort to shorten a patient's hospital stay without sacrificing quality medical care and, when possible, utilize extended care or similar facilities.

Article X: When admitting patients, have a coordinated plan of action to assure necessary, timely diagnostic workups. Ancillary departments can be consulted to help coordinate and expedite the action plans.

This code was adopted by the society's board of directors in April 1979.

Re: Malpractice Insurance Article

Editor:

I wish to make some pointed comments regarding the article "Malpractice Insurance — What Can Happen if You Don't Have It," by attorney William S. Hunt in the June 1985 issue. If one closely reads Mr. Hunt's article, with a questioning mind as to the value of malpractice insurance, one may come to an entirely different conclusion than that of the article. Mr. Hunt's points can equally well be used as arguments in favor of "going bare" (i.e., choosing not to carry malpractice insurance).

First, Hawaii happily has a law which causes all complaints of medical malprac-



"Since you cured my split personality, I suffer terribly from loneliness."

tice to pass through the Medical Claims Conciliation Panel (MCCP) before a lawsuit can be filed. After a hearing before a panel of two attorneys and a physician which includes evidence from both sides, the majority of such complaints are found in favor of the doctor and the large majority of these cases do not go on to trial. Although a nuisance and mildly time-consuming, the cost to the physician in presenting his/her case at the MCCP is generally negligible compared to a trial.

One must also, I feel, approach the issue of liability and potential financial loss with practicality and judgment as to modern life. Attorneys are as much interested in making money as anyone else in our society, and are, in my opinion, less likely to spend a great deal of time, effort, and money in seeking to "get blood out of a turnip" than to pursue settlement of a claim with an insurance company. The latter is of course all too frequent today. Certainly the unwise physician who chose not to have malpractice insurance could suffer financial losses from a negative court judgment. However, this assumes that the case has gone through the MCCP, has been brought to trial and found in favor of the plaintiff, and that the attorney has continued to pursue the issue of trying to obtain funds from an uninsured physician after the court judgment. The latter can take a great deal of time, and statistics show that a large percentage of such judgments in Hawaii are never paid, regardless of the category of the losing defendant. It would seem clear to me that the average attorney might seek to make his income faster and more easily in other ways. Please bear in mind that I am not quarreling with nor criticizing attorneys; rather, I am merely pointing out their common humanity with the rest of us.

As to joint-and-several liability in cases in which other physicians or the hospital are involved, one must again keep in mind the unfortunate problem that insured parties are often the sought-after defendants. Once again, it is simply too easy nowadays to get many of the insurance companies to settle out of court. This is a relatively simple and fast way for the attorney and client to receive their compensation in the case. Again, it is an unfortunate statistic that physicians in Hawaii who carry insurance are far more likely to be sued than those who do not. The "devil's advocate" observer might question whether the uninsured physicians simply commit very little malpractice. I will leave it to the reader to ponder this stirring question.

It is also unfortunate that hospitals have been forced to protect themselves, due to lack of tort reform, by forcing all physicians who practice within their walls to have malpractice insurance. Considering my above points, one may wonder whether an increased percentage of physicians under the hospital's roof who have insurance will merely result in an increased number of lawsuits, to which the hospital will be tied as a co-defendant. I am afraid future statistics will show this to be true.

Yes, there are risks to going without malpractice insurance. There are also risks to carrying it, and one of these is the near certainty, today, that a physician who carries insurance will eventually be sued. A physician without insurance is much less likely to be sued, but might possibly sustain a serious financial judgment against him. What actual *loss* might then occur over future years would depend on a number of factors, as well as the financial planning of the involved physician.

Thus, the discussion over the merits of malpractice insurance continues unabated. Personally, I feel that each physician should make this judgment for himself, and am very much against mandatory malpractice insurance. I certainly would not have been saying this six or eight years ago, but I am now. The handwriting is on the wall as to the disastrous and seemingly endless abyss created by malpractice insurance in its present form.

Bruce B. Chrisman, MD

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A More Cost-Effective Evaluation of Syncope

Paul E. Bogden, MD

Causes of syncope may range from benign to ominous. The underlying problem may be clear by history and physical examination, or may elude more extensive evaluation. In order to identify a cost-effective approach, the diagnostic contributions of history and physical and laboratory investigations were reviewed at The Queen's Medical Center.

Patients and Methods

All admissions from June 1983 to June 1984 were screened by computer to find primary or secondary diagnoses of syncope. For study purposes, syncope was defined as a transient loss of consciousness with inability to maintain an upright posture, followed by complete and spontaneous recovery.

Patients were excluded if: (1) They did not lose consciousness or muscle tone; (2) they did not recover spontaneously, including the recovery of blood pressure greater than 90 systolic; (3) unconsciousness was prolonged more than 20 minutes; (4) loss of consciousness followed trauma to the head; or (5) if there was a seizure prior to, or concurrent with, the loss of consciousness. Cases with generalized seizures, *after* loss of consciousness and muscle tone, were included in the study.

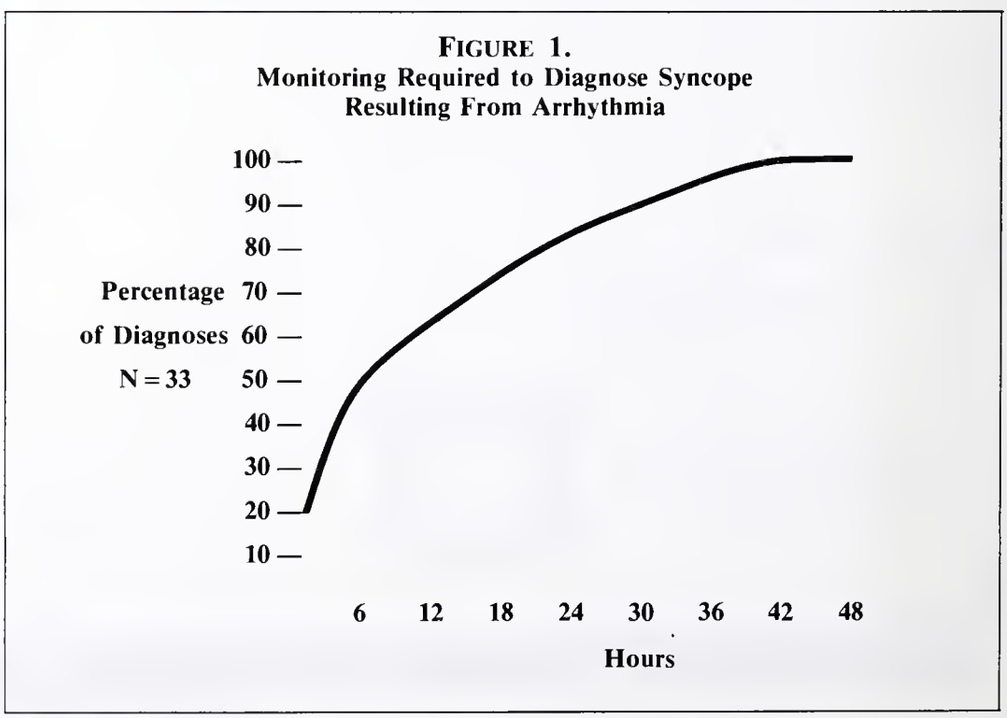
Excluded by these criteria were 97 cases. Of the remaining 142, 78 were females and 64 were males. Age ranged from 17 to 95 years with the geometric mean in the eighth decade. The average length of stay was 5.2 days (4.5 days if one patient was excluded who waited 96 days for placement). Follow-up data were not available beyond hospital records, which included readmissions during the study period. Two deaths occurred, one with a final diagnosis of cardiac arrest and the other with suspected massive pulmonary embolism. There were seven bone fractures, four lacerations requiring sutures, 16 hematomas, and five head abrasions.

Primary sources of syncope listed in discharge summaries and final diagnosis sheets are shown as percentages in Table 1, with the results of two similar studies from the literature.[1, 2]

Cost-Effectiveness of Cardiovascular Monitoring

EKG and rhythm monitoring were collectively responsible for discovering 33

FIGURE 1.
Monitoring Required to Diagnose Syncope Resulting From Arrhythmia



Accepted for publication May 1985

Special thanks to the Queen's Medical Records Department in compiling charts for review

cases (42%) of the primary causes at QMC. The length of monitoring required for diagnosis is shown in Figure 1. Most arrhythmias were found within 24 hours, but several appeared between 24 and 48 hours. Monitoring exceeded 48 hours in many cases, without further diagnostic yield. Reasons for lengthy monitoring included absence of data regarding symptoms during a potentially causative arrhythmia. Cost-effectiveness might be improved, then, by efforts to correlate signs and symptoms with observed arrhythmias.

Cost-Effectiveness of Laboratory Testing

Five definitive diagnoses were made by laboratory evaluation. Specifically, blood levels revealed digitalis toxicity, extreme anemia, hypoglycemia, hypoxemia, and hypokalemia. In each case, the diagnosis might have been suspected by clues from the history, physical, or rhythm monitoring. Other causes also were established by laboratory evaluation, resulting in the total of primary and potentially contributory causes listed in Table 2. Diagnostically helpful results in Table 2 are further divided into those that confirmed abnormalities suspected by the history and physical examination vs. those found incidental to laboratory screening without a particular goal.

In general, the laboratory was ineffective if used in an undirected manner. However, there were two exceptions: Hemoglobin determination frequently uncovered unsuspected anemias and chest X-ray revealed unsuspected infiltrates, congestive heart failure, and two tumors.

Random blood sugar, fasting blood sugar, and glucose tolerance tests did not yield a diagnosis except in one known diabetic patient with classical symptoms of hypoglycemia. Urinalysis, skull X-rays, and EKGs yielded no diagnoses. SMA_{12} was helpful only in the presence of previously known conditions that foretold metabolic abnormalities. Serum electrolytes frequently were abnormal, but only in hypertensive patients using diuretics, and in alcoholics and anorectic patients, as well as those with diarrhea and/or vomiting.

Only one patient had hyponatremia without any apparent cause other than strict dietary salt restriction. CAT-scan of the brain was abnormal only when there were localizing neurologic findings or a history of CVA. A white blood count was never helpful except in the presence of fever or prolonged hypotension.

Efficacy of the History and Physical Examination

Together, the history and physical examination were responsible for 52% of the definitive determination of causes of syncope made at Queen's. This figure is consistent with results found in previous studies.[3, 4]

Many historical features have been identified as helpful in diagnosis in the Queen's and other studies. For example, painful or emotionally disturbing circumstances preceding syncope characterized a vasovagal origin. Prodromal symptoms typical of a vasovagal source were weakness, nausea, diaphoresis, blurring of vision, and a sensation of impending loss of consciousness.

By contrast, seizures were charac-

TABLE 1.

Etiology	QMC N = 142	Kapoor[1] N = 204	Silverstein[2] N = 108
Vasovagal	6.9	4.4	0.9
Psychogenic/Situational	1.4	7.9	—
Hyperventilation	—	—	—
Cardiac			
Aortic Valve	—	2.4	3.7
Vent. Arrhythmia	9.1	9.8	12.0
Sick Sinus Syndrome	3.4	4.9	3.7
Heart Block	4.9	1.0	5.6
Supra-Ventachy	4.9	1.5	5.6
Isch. Heart Disease	1.3	1.0	5.6
Carotid Sinus Sens.	—	0.5	—
Aneurysm	—	0.5	—
Pulmonary			
Pulmonary HBP	—	1.0	—
Pulmonary Embolus	—	0.5	2.8
Neurologic			
TIA/Stroke	4.2	1.5	4.6
CNS Tumor	—	—	—
Seizure	0.7	1.5	—
Brainstem Disease	0.7	—	—
Orthostatic Hypotension	8.4	6.9	3.7
Subclav. Steal	—	1.0	—
Post-Tussive/Micturition/Defecation	2.8	—	0.9
Hypoglycemia	0.7	—	—
Drug Induced/Metabolic	7.6	3.0	3.7
Miscellaneous	0.7	0.5	—
Unknown	42.6	47.0	47.0

TABLE 2.

Test	Total Performed	Directed, Diagnostically Helpful	Undirected, Diagnostically Helpful	Not Helpful	Cost Per Test
Electrolytes	119	23	0	96	$ 55
Blood Sugar	54	1	0	53	21
(WBC) with diff.	102	3	0	99	25
CAT-Scan Brain	33	3	0	30	380
CXR	91	7	9		61
EEG	13	0	0	13	153
GTT	2	0	0	84	
SMA_{12}*	63	5	0	58	28
UA	115	—	—	115	15
H/H	102	4	18		18
Skull Films	9	0	0	9	100

* SMA_{12} includes Glue, BUN, Creat, Uric Acid, LDH, SGOT, Alkphos, Chol, Total Protein, Alb, Total Bilirubin, Calcium.

terized by an aura of auditory, visual, tactile or olfactory sensations, loss of sphincter control, and a post-ictal period of confusion or lethargy.

The characteristics of a seizure and its temporal relationship to loss of consciousness were important to note. Although a generalized tonic-clonic seizure might follow syncope as the result of interrupted blood flow, a seizure preceding the loss of consciousness indicated an underlying primary seizure disorder.

Associated shortness of breath was consistent with cardiac and pulmonary causes, as well as hyperventilation. Associated chest pain was found in dissecting aortic aneurysm, ischemic heart disease and pulmonary embolism. Localized neurologic symptoms were indicative of stroke or TIA.

The patient's prior activity was important: Syncope on exertion was suggestive of such fixed cardiac output states as AS, IHSS, CHF and massive pulmonary embolism. Syncope induced by single-arm exercise indicated Subclavian Steal syndrome. Syncope following cough,[7] micturition[8] or defecation[9] suggested these as causes.

Body position at the time of the event was important: Orthostatic symptoms suggested a spectrum of well-defined etiologies. Syncope in the prone position was consistent with seizures or arrhythmias.

A past medical history often was relevant: Medication and drug use were found to be responsible in a number of cases, resulting from the use of antihypertensives, nitroglycerin, narcotics, potentially arrhythmogenic drugs and psychotropic agents. A history of nausea, vomiting, diarrhea, GI or other bleeding was important in terms of the volume and electrolyte status.

Morbid conditions potentially contributing to the problem were pregnancy, prolonged recumbency, exhaustion, starvation, COPD, a history of ischemic heart disease, cardiac arrhythmia, congenital or valvular heart disease, palpitations, known seizure disorder, hepatic or renal insufficiency, hypertension, diabetes and anemia.

Factors predisposing to pulmonary embolism[11] were pertinent, including recent plane flights, use of birth control pills, congestive heart failure, and history of deep venous thrombosis. A menstrual history is important to rule out pregnancy and anemia of hypermenorrhea.

The physical examination provided crucial data in the Queen's and other studies. For example, prolonged hypotension often was associated with severe infection, as well as with cardiac or pulmonary problems warranting aggressive investigation.

Orthostatic blood pressure was associated with a wide variety of well-documented causes of syncope.[12] A difference in blood pressure between the two arms was suggestive of Subclavian Steal.

Pulse measurement over several minutes was important in order to detect arrhythmias that might have been missed over the duration shown by the EKG rhythm strip. Elevated respiratory rate and tachycardia were subtle clues to otherwise "silent" pulmonary embolisms.[13]

Signs of trauma were important in assessing the possible existence of injuries causing, or resulting from, syncope.

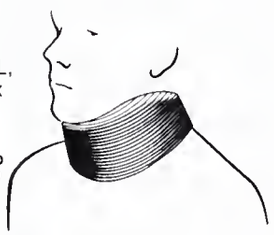
Examination of the range of motion at the neck should include sustained side-to-side motion and head-raising in order to assess the possibility of vertebrobasilar insufficiency. Carotid body massage[10] may reveal carotid hypersensitivity resulting in a decrease in systolic blood pressure of 50 mm, a reduction of heart rate of more than 30% or ventricular asystolic for longer than three seconds. (It is wise to have facilities and staff

(Continued on page 344)

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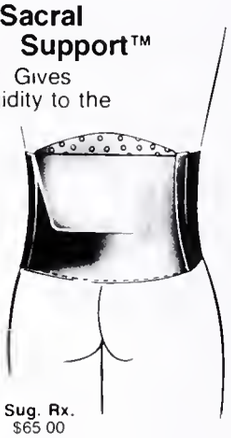
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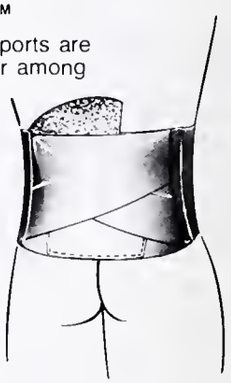
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(Continued from page 342)

available for CPR in the rare event that resuscitation should be necessary following this maneuver. Also, patients with carotid bruits are at increased risk of neurologic sequelae as the result of carotid massage.)

Examination of carotid pulsation may signal the presence of aortic stenosis, aortic insufficiency or IHHS. The presence of cardiac murmurs should be investigated further, in order to rule out valvular or congenital heart disease.

A localizing neurologic exam, or the finding of papilledema, was predictive of a neurologic origin of the syncope. Abnormal mental status often was found in the presence of metabolic disorders.

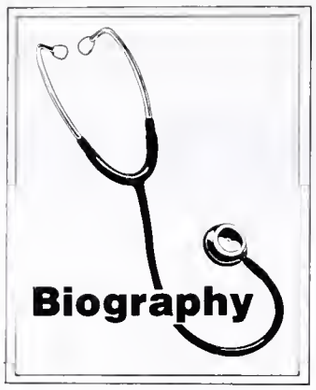
Provocative valsalva maneuvers were helpful in discovering causes of syncope resulting from defecation, micturition, cough and hyperventilation. A stool occult-blood measurement was important in ruling out anemia from GI bleeding.

Conclusions

A thorough history and physical examination, followed by EKG, hemoglobin measurement, chest X-ray, and cardiac monitoring ascertained the causes of syncope in 92% of the cases in which a cause could be established at QMC. Other follow-up laboratory testing was useful in confirming tentative diagnoses suggested by these basic evaluations. However, additional diagnostic testing was largely ineffective and expensive if used without proper indication based on the history, physical examination, and cardiac monitoring.

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Hing Biu Luke, MD

50 Years And Still Practicing

The Hawaii Academy of Family Physicians honored Hing Biu Luke, MD, at its annual meeting in February 1984 for having been in active practice as a GP and family physician for 50 years and still going strong. His wife is "Kammie" Wai Kam Hee Luke. They have one daughter, Mrs. Noella Luke Levy, and two grandchildren, Tamara, 14, and Brian, 10, who live in California.

"HB" Luke was born in Honolulu Oct. 9, 1908. His father, Luke Chan, was born in China. The elder Luke was a revolutionist with Dr. Sun Yat-sen, serving him briefly as First Secretary. Chan graduated from Punahou after coming to Hawaii and became an interpreter for the U.S. Immigration Service, a reporter for the daily New China Press and a clerk at Hackfeld's, the precursor to Amfac's Liberty House.

Dr. Luke's mother, Au King, also was born in China. She gave birth to eight children, HB being the sixth. Seven are still living — three boys and four girls. HB's younger brother, Leslie Luke, MD, was a City & County physician before his retirement.

Although all of his older brothers and sisters graduated from Punahou, Dr. Luke went to McKinley High School, graduating with the class of 1926. He went on to the University of Hawaii and was active in track and field and fencing; served as captain of the rifle team, class of 1930; and was a second lieutenant in the Reserve Officers, U.S. Army.

He was accepted at Loyola School of Medicine in Chicago (now known as Stritch) at the end of his third year at UH and received his MD degree there in 1933. During an externship at Chicago Lying-in Hospital, he was introduced, with trepidation, by his chief as the first Oriental physician to serve there, but he was readily and warmly accepted.

Dr. Luke served a one-year internship at St. Mary's Hospital in Grand Rapids, Mich., before returning to Honolulu, where he opened a solo general practice office on Smith St. in Chinatown in 1935. He remained there for the next 27 years.

He has been on the staff of every Honolulu hospital and still admits patients; he gave up surgery and obstetrics in 1982, the latter after having delivered the babies of many mothers whom he had also delivered.

He is a member of the PAR Committee at Queen's Medical Center, and a longtime member of HCMS, HMA and AMA. He is a charter member of HAGP — now HAFP — but dropped out for about 10 years before rejoining.

He has never sought any office but has always been supportive of organized medicine, devoting himself exclusively to his practice. His interest has been and remains primarily in counseling youngsters. During World War II, he served as examiner for the Selective Service Boards and almost made it into military service, but was excused as the war ended.

He was married in 1938. Kammie Luke was a graduate of the University of Hawaii in home economics and fashion design.

Dr. Luke has been active in local Chinese societies and in the Hawaii Chinese Civic Club. He visited the People's Republic of China with a tour of physicians in 1981 and returned to his ancestral Sun Yat-sen village in Kwantung Province, where he was warmly greeted by those oldtimers who had known his father.

In 1962, Dr. Luke moved to his current office in the Professional Center Building at the corner of King and Kaheka streets. At age 65, he reduced his office hours to mornings only. He has been assisted for nearly 40 years by his office nurse and receptionist, Lillian Ito.

He keeps healthy and very fit by walking three miles and jogging a half-mile every other day, and uphill at that! He despises elevators and escalators, and goes up five flights of stairs to his office and 11 flights to his Wilder Avenue condo. His hobby is hunting — ducks, geese, pheasants, antelope and deer. He takes annual trips to the Rocky Mountain states and the West Coast for that purpose.

Dr. Luke has no prospect of retiring; though 75, he looks and feels 55. What does he say about general and family practice? "Too damn tough; have to keep up with too much stuff. But it's a lot of fun."

J.I. Frederick Reppun, MD

Health Care Marketing

William G. Dodge Jr.

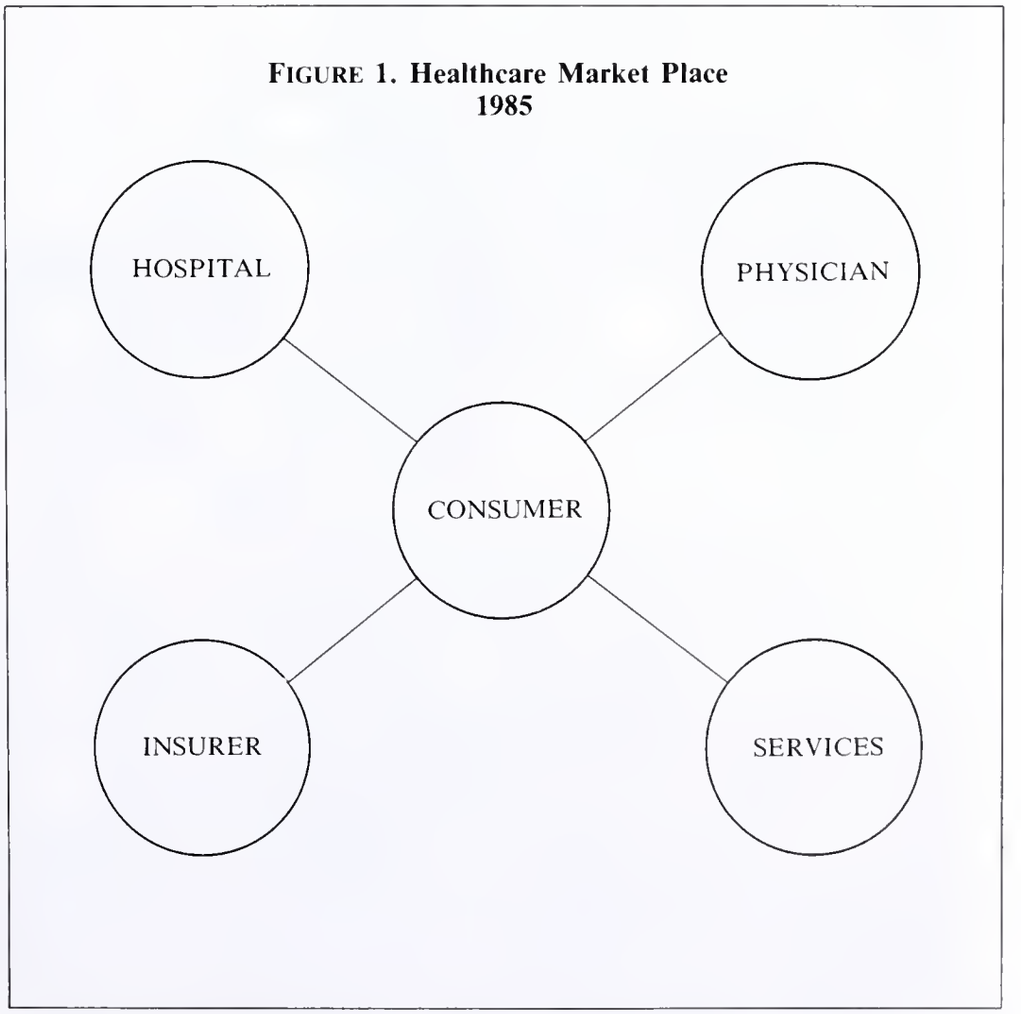
Health care is big business. In Hawaii it is probably the fourth- or fifth-largest industry in terms of gross dollars, number of employees and capital investments. In 1984, more than $400 billion was spent on health care in the United States. In Hawaii, this equals about $1,400 per household. Nevertheless, the health care industry is in turmoil.

Because Medicare costs have been skyrocketing, the federal government has recently put a lid on how much it will pay hospitals for more than 400 diagnosis-grouped, Medicare-related procedures. It is also quite likely that physicians' income from Medicare patients will become restricted.

It is reported that the federal government is responsible for more than 40% of the nation's expenditures for health care. In addition, business-sponsored, personal and industrial medical insurance plans significantly contribute to total dollars spent on health.

Historically, the physician has controlled hospitalizations, laboratory and X-ray services, elective surgeries, office visits, ancillary support services and lifestyle medicine. It is the physician who influences more than 60% of health care expenditures. However, in 1985, there is growing competition for health care dollars generated by an oversupply of physicians and services. There also is resistance on the part of business and gov-

FIGURE 1. Healthcare Market Place 1985



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P.O. Box 8408
Honolulu, Hawaii 96815
(808) 637-5616 (res.)

* Dodge is a specialist in market planning for health care.

Accepted for publication May 1985.

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ernment to continue to pay exorbitant medical bills. For the very first time, the public is being asked to share the expense of medicine. This is fueling consumerism within the health care industry, as the public looks for value. The myth that high price equates with high quality is being questioned. The "Iodine Theory" is beginning to burn itself out, as we go on to explain.

"No price is too high to pay for life," we have been told. The American public has been willing to pay almost any dollar amount for what has been perceived as the highest quality medical care.

Yes, advanced technology has inflated medical costs, but the perception of high quality also has had a significant impact on the industry. Of course, unnecessary surgery and overuse of health care have contributed to the problem, too. In the past, it was assumed that if specialized surgery cost $25,000, imagine how much better the quality would be in a $35,000 procedure.

Thus, the evolution of the Iodine Theory: "The perceived quality of medical care is directly proportional to the amount of wallet burn." Your grandmother justified the inevitable burn, when iodine was applied to a cut finger, by telling you that the more it burned, the better the cure. Currently, this is a sales message used by some mouthwash manufacturers.

Today, we have the age of consumerism in the health care industry. With the coming awareness of the public and with its desire to control personal health, lifestyle and medical expense, the germination of the business philosophy of "marketing" has taken place — "finding a need and filling it," as the old marketing adage goes.

The lemonade-stand approach to selling medicine is fast becoming unprofitable. In the past, little thought was given to the location of hospitals and physician offices. The consumer had little input as to what services were offered. In the 1980s the consumer of health care can no longer be ignored. It is the scientific philosophy of marketing that will allow many health care providers to survive, and it is the lack of market planning that will cause other providers to go under or retire prematurely.

Marketing simply puts the consumer's needs first. (See Figure 1.) Marketing is *not* selling. It is a design for businesses, which serve the needs of some customers, to anticipate a reasonable profit for those who risk their money in the enterprise.

Before a physician or hospital spends a penny on advertising, promotions or public relations, a market plan must be developed. Hospital strategic planning and market planning must work together in order to evaluate the marketplace and to define its various needs.

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FIGURE 2. Dominant Health Care Consumer Motivational Factors

convenience	awareness	technology
personalization	cost savings	environment
quality of care	philosophy	emergency services
image	specialization	quality of service

FIGURE 3. Health Care Market Plan Outline

1. Analysis of Marketplace	Market Research Provider Review Competition Sources of Provider Income Consumer Research Persuasion Analysis
2. Development of Marketing Strategies	Existing Services Competing Services Transition Plans Future Programs Opportunities Alternatives
3. Integration of Strategic Plan	Program Design Facilities Services
4. Planning for Persuasion	Selling Advertising Promotion Public Relations Competition
5. Budget	Based on Plan Objectives, Resources and Competition
6. Annual Marketing Review	Analysis of Marketing Objectives Implementation Review Marketplace Review Short-term Goals Long-range Goals Trends

Market Planning will focus the health care provider on the needs of the four dynamic categories of the health care industry: Consumers; physicians (solo, group, corporate or in provider organizations); their employees (who are all in a position of being salespeople); and the "payor" (the consumer himself, his medical insurer, his employer, his "medical plan," or the government). Eventually, strategies will be developed to integrate each category into achieving overall objectives. Once the identification of these needs is made through extensive market research, then marketing experts can take the lead in determining and coordinating how each service within the provider's business will satisfy these needs.

One purpose of market research is to determine the uniqueness of the provider's services or product — actual, potential and perceived. Only the most important facts of the marketplace should be analyzed. This will aid in determining marketing niches, those special environments that differentiate between needs. Trends are reviewed in order to try to understand the potential consumer, to understand what motivates the consumer and to anticipate his future needs.

The consumer's motivational needs (Fig. 2) will vary by demographic group, i.e. sex, income, age, race. Because of policing by government, the public, and medical societies, the presumption can be made that there is little significant difference in the actual quality of similar providers or services. However, all differences between providers must be evaluated carefully.

Once the consumer trends are analyzed, "marketing strategies" will be developed. These strategies will formulate many alternatives to satisfy various consumer needs. Some of the strategies will have a significant impact on how health care providers conduct business.

Marketing Programs will be developed, but not implemented, to carry out proposed strategies. These untested programs must be reviewed for impact on the four dynamic categories of the industry. Major programs should be thoroughly tested before money is spent on selling. Marketing budgets are based on current resources, marketing objectives and the competition. While a marketing budget of 1% of anticipated gross income appears to be an emerging industry norm, this expenditure need not be dictated by marketing objectives.

Persuasion, or selling strategies, will be developed by marketing experts, once the needs of the marketplace are matched by the capabilities of the providers of health care. The art of selling, advertising, promotion and public relations is the tool of persuasion used in marketing. The overall marketing objectives must be kept in mind as the strategy of persuasion proceeds.

Thus, the Healthcare Market Plan (See Figure 3) is a business guide that capitalizes on the needs of the various consumers, recognizes the needs of the four dynamic categories of the industry, anticipates future needs and allows for the unexpected. The market plan makes maximum use of the resources and the time of the provider. It must be realistic, closely managed and controlled, and reviewed at least annually. The Healthcare Market Plan represents the interrelationship between strategic planning, market planning and persuasion.

In summary, anticipating how the demise of the "Iodine Theory" will affect health care providers presents many new business opportunities to those who are prepared to make the change — a change in the way they do business, a change in the way the needs of the consumer are satisfied, and a change in the philosophy of health care. Only the marketing "smart" will survive.



The AMA and U.S. Health Policy — Since 1940; Frank D. Campion, 605 pp. Chicago Review Press, Chicago. $25.

A frank history of change and forces precipitating change that resulted in the evolution of the AMA.

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It contains lessons for everyone to avoid pitfalls in leadership.

A first-class history we should all be familiar with.

George H. Mills, MD
Medical Director,
Kamehameha Schools

ERRATUM:

The names of Drs. K. Yano, MD, and P.D. Ross, PhD, were inadvertently left out of the title of the article, "Osteoporosis Among Hawaii Japanese: A Review of the Major Findings of the Kuakini Osteoporosis Study," in the August 1985 Kanyaku Imin Special Issue.

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Over the Editor's Desk

The Arizona Medical Association (ArMA) voted at its annual meeting to cease publication of *Arizona Medicine,* its medical journal, but to insert a special Arizona section in the *Western Journal of Medicine.* The Arizona edition of the *Western Journal of Medicine* will have 16 or 32 pages of Arizona contributions, he said. *Arizona Medicine* had been losing money for more than 10 years, Robinson said.

* * *

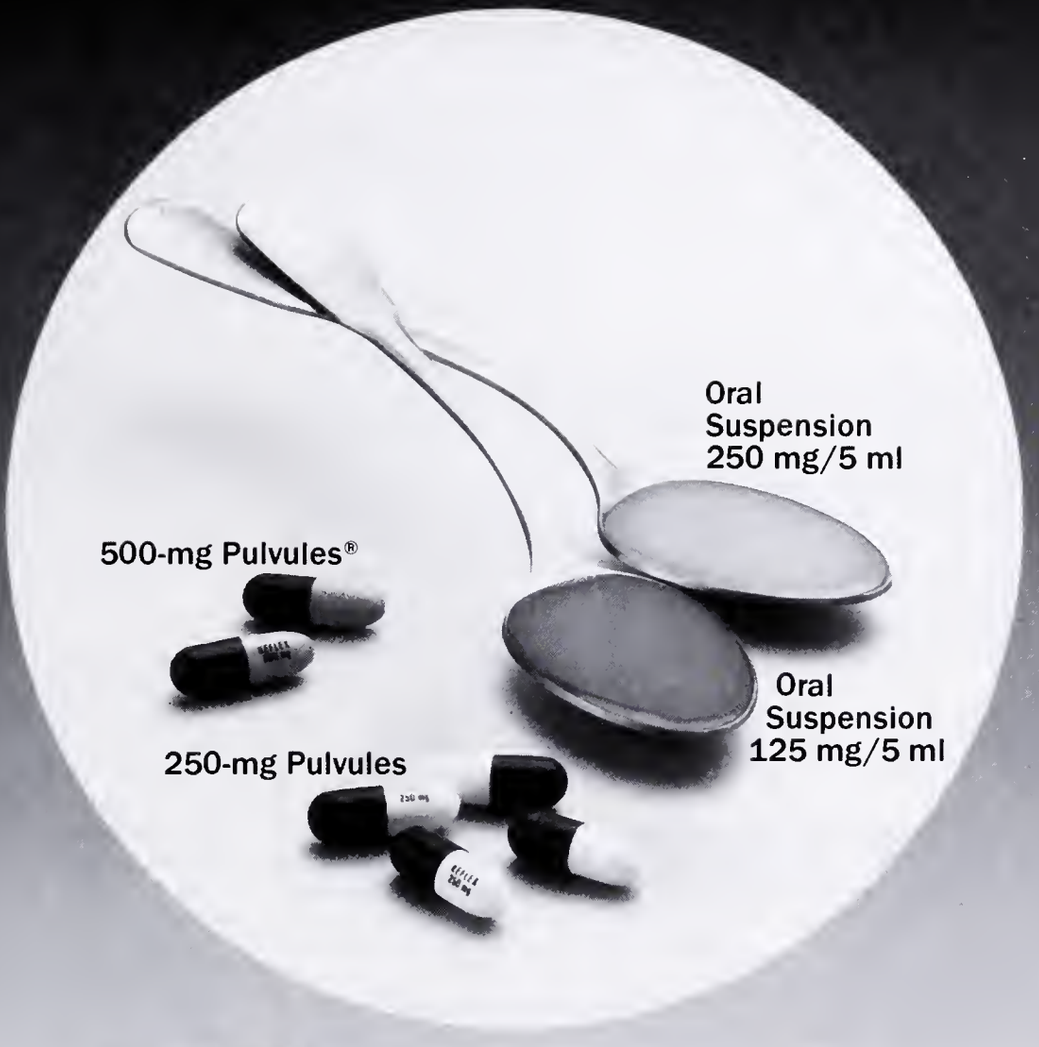
A federal contract for nearly $1 million has been awarded to the Hawaii Cancer Information Service at the Cancer Research Center of Hawaii. The contract provides funds to continue operation of the seven-year-old service for the next 4½ years. Funding for the contract is provided by the National Cancer Institute, which funds several similar offices throughout the U.S. The contract here will be administered by the University of Hawaii. Purpose of the contract is to interpret and distribute information on the cause, prevention, detection, and treatment of cancer. Intended audiences are the general public, cancer patients and their families, and health professionals. The primary method used by the Cancer Information Service to get information to the public will be a telephone information line, 524-1234. Neighbor Island residents are invited to call collect.

* * *

New York State Social Services Commissioner Cesar A. Perales has unveiled a plan to develop and operate the most sophisticated electronic system in the nation for checking eligibility of Medicaid recipients. The system, which is the only one of its kind, is based on plastic identification cards with a computer-coded magnetic stripe that will replace the paper cards currently issued each month to Medicaid recipients to verify their eligibility for the program. The new system will allow eligibility data to be entered on a daily basis, rather than the current monthly updating, so that recipients who lose eligibility during any given month will not be able to receive services. This will result in a savings of at least $16 million annually.

(Continued on page 366)

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Medical Economics, Health Care Costs/Financing Hawaii, 1985

C.J. Tupper, MD

Twenty years ago, in the mid-1960s, there was grave concern among the general public and within our profession with what was called the "health manpower crisis." America was said to be 50,000 doctors short, and needed many more dentists and nurses as well.

In response, medical schools enlarged their classes and the number of medical schools in the United States increased from 86 to the current 124, with your medical school in Hawaii and mine in California being part of that increase. Today the concern within the profession is with a "physician glut." But the concern of the profession and certainly of the public is now not a crisis in health manpower but a crisis in health care costs. Indeed, one sometimes feels that the "crisis" designation is being fostered by those who make American medicine and its physicians a favorite, targeted whipping boy.

Let's take a look at this together and try to put some of it in perspective. Health care costs today are said to consume more than 10% of the gross national product. Nobody knows what the right percentage is, and maybe 10% is too much, but maybe it is not enough. In Canada, it stands at 8%; in Great Britain, slightly less than 6%; in West Germany, about 10%; and in Sweden, higher than that, although obscured in general taxes.

Of course, there are differences in methods of calculation in the several countries. In the United States, for instance, some long-term care costs, which are as much social expense as medical, are included. Nevertheless, the amount of the GNP so designated has risen substantially over the years.

We did not keep such statistics in the United States until 1926 when, for the first time, it was determined that health care costs were consuming between 3% and 4% of the GNP. This was such an alarming discovery that it led to the creation, in 1927, of a presidential commission on health care costs, chaired by Dr. Ray Lyman Wilbur, then president of Stanford University. Grave concern was expressed at the time as to whether the nation could afford that level of medical care.

Interestingly, one of the largest jumps in health care costs occurred during World War II. At that time, prices and wages were frozen, but fringe benefits were not. Shipbuilders, munitions manufacturers and producers of weapons of war rewarded their employees with substantial increases in fringe benefit packages including, for the first time, first-dollar coverage for hospitalization insurance.

Simultaneously, and extending over the following decade and even until today, some serious injustices and inequities were corrected.

There had long been a tacit social assumption that those who worked in and about hospitals should work for less, as part of a contribution to humanity and society. Most classes of workers in hospitals were paid significantly less than their counterparts in almost any other line of endeavor. When I was in medical school, nurses worked a 48-hour week. Most bedside nursing was done by nursing students, without compensation. Interns received room and board and $25 a month for "incidental" expenses. A few years later, the nursing work week was reduced to 44 hours, and later to 40. You know what has happened since to the compensation for paid house staff! All of these corrections of inequities have added to the cost of the hospital bill.

Then, in 1966 came Title 18, or Medicare, and Title 19, or Medicaid. Both have been enormously successful in providing increased access to quality medical care for millions of our citizens who did not have it before. But Medicare was tied to Social Security which, you will recall, was enacted in 1935. At that point in time, the magic number of 65 was picked as a retirement age and, while not often referred to, it was recognized that many recipients of Social Security benefits died either before reaching 65 or shortly thereafter.

A $200 burial benefit would be the only cost to the system. Unforeseen was the fact that in America, life expectancy would rise to 69.7 years by 1960 and to

Accepted for publication May 1985

almost 75 years today. Also unforeseen was the fact that in 1985 the fastest-growing segment of our population, percentage-wise, is made up of those who are more than 85 years of age.

Beginning with the California Physician's Service — later to become Blue Shield in 1939 — there arose what came to be improperly called "health insurance," improperly so because it does not insure your health but, rather, provides illness and accident care insurance. Tied to that were demands, mostly by unions, for ever-broadened coverage and for first-dollar coverage.

Initially, such insurance was solely hospitalization insurance. Patients badgered their doctors to admit them to a hospital so that their health care costs would be covered by their insurance. Early on, insurance covered almost nothing in an ambulatory setting, but that has progressively changed.

I vividly remember sitting as a member of the Board of Directors of Blue Shield of Michigan. Another one of the directors was a Mr. Irving Bluestone, a vice president of the UAW-CIO. In its labor negotiations with the Ford Motor Co. that year, the union had insisted on the addition of outpatient psychotherapy as a benefit in the contract. It was negotiated between the union and the auto manufacturer, without consultation with the insurance carrier.

I recall turning to Mr. Bluestone and saying, "Do you have any idea of what this is going to cost?" and having him reply, "We don't care what it costs. It's a benefit that we want for our members, including group psychotherapy counseling sessions." Now that, too, has changed, in that unions now also express concerns about cost.

Today, we are involving ourselves with the organization of voluntary health care coalitions composed of physicians, hospitals, insurers and business and labor leaders to seek ways of achieving cost-effectiveness while maintaining accessibility to high-quality care. We engage in voluntary health planning activity to review and make appropriate recommendations about expanding existing and building new acute care facilities.

Another result of the universal desire to contain health care costs is the competitive movement in delivering health care that seems to threaten our traditional modes of practice. I refer to the IPA, or Independent Practice Association; the HMO, or Health Maintenance Organization; the PPO, or Preferred Provider Organization; and the EPO, or Exclusive Provider Organization. To this list someone has added the OWA, which stands for Other Weird Arrangement.

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However, while we should accept some of the blame, let's pass some of it on. Where hospitals have been inefficient in management of business practices, then they share it.

Our tort liability system and malpractice situation bear blame, as we've said, and in that regard, the courts are to blame also. Where tort reform is concerned, we now find ourselves with some new allies, as city and county governments and boards of education in some instances find themselves no longer able to obtain liability insurance at any cost.

They, too, are having the experience of being the "deep pocket" in cases where they share only a small percentage of responsibility but, since no other defendant has sufficient funds, government agencies end up paying the entire judgment.

Legislatures that mandate minimum benefits in insurance contracts and establish rules and regulations that require a whole new bureaucracy in each hospital for compliance are to blame.

We're touching on each of these areas just briefly, but let us stop for a moment and look in greater detail at what we mean by a whole new bureaucracy.

1 found the following report in the February 27, 1981, edition of JAMA, and 1 quote: "1 asked the director of a major hospital how many organizations his hospital regularly reported to, or was registered, influenced, or accredited by. He stated that he would estimate some 200 different organizations. We counted 296.

"These included many licensing, inspection and accreditation agencies for 23 specialties; the Interstate Commerce Commission for approval of the blood bank; the Center for Disease Control for laboratory quality control and safety; the Food and Drug Administration; National Institutes for Health; Equal Opportunity

Commission; Occupational Safety and Health requirements; code requirements for fire, electrical machinery, stairwells and exits; accuracy testing in all laboratories; radiation physics measurements in radiology; and mandatory parking lot lighting requirements in candle power.

"Some hospitals estimate that 25% of the cost of each bed is a regulatory cost. In addition, there are hundreds of new controls published every year in the Federal Register. At least 37 organizations regulate hospitals' clinical laboratories."

The third-party carrier, providing incentive for use of high-cost technology over cognitive services, and for inpatient care over outpatient care, shares the blame.

But we must share some of all that blame, for the physician is a purchasing agent. We are the ones who decide on admission and on the diagnostic and therapeutic procedures to be used. We decide how long a patient shall stay, whether an intensive care unit shall be used, what endoscopy and what radiologic procedure shall be employed, and so on.

And so — to the extent that increasing health care costs are due to inappropriate use of hospitals, of procedures, of our services and of drugs — we are to blame. But there is a limit to cost savings that can be achieved by a more appropriate use of hospitals and tightening of hospital fiscal policies.

Once the fat is trimmed away, then further cost reduction is bound to impinge on quality of care. My concern is that quality of care seems to be a matter to which many pay lip service but to which only physicians attach real and significant importance.

We face a real dilemma. Whatever modifications we may make in our health care system, certain factors will continue to push costs upward.

First, health care is a labor-intensive industry in which mechanization can play only a limited role. Even though inflation is now under much better control than in the recent past, wages will rise and, to that extent, health care costs will increase.

Second, technological advancement has greatly extended our means of ameliorating the effects of disease. New technology in medicine has tended to be cost-raising, in contrast to the cost savings that new technology usually brings to the industrial world. This relates to the fact that the goals of medical technology are health-oriented, not cost-oriented, as they are in the industrial world.

Third, demand for medical services is increased by third-party payment structures that obscure the actual cost of care.

Fourth, any form of national health insurance, as well as growing success at improving the geographic distribution of medical manpower, will result in a greater use of medical facilities and thus greater expenditures.

Fifth, elimination of most serious infections has only shifted the common causes of disability and death. Because of social changes and the aging of the population, the incidence of emotional disorders and degenerative physical and mental conditions is increasing. Preventive measures may delay or alleviate them, but, unlike virulent microbes, they cannot be wiped out. A breakthrough in research might eliminate heart disease or cancer, but it would extend life expectancy into the ninth or 10th decade, where the need for medical care would again become paramount.

Therefore, while the nation's bill for health care inevitably will rise, our obligation must be to moderate that rise to the best of our ability and to try to keep the rate of increase in the cost of health care to a level that can parallel the rate of increase in the GNP and thus take no larger a slice of the pie than the current approximately 10% of the GNP that we as a nation are now spending on health care.

At this point, you might well say that all of this is interesting, with its global concepts, but what has it got to do with me as the individual physician, and what can I do about it?

First of all, you can continue to encourage the development of cost-consciousness in the course of medical education. The University of Hawaii has been doing that effectively since 1979 and was a national leader in this regard. Nevertheless, I would like to share with you my own county medical society's "Physician's Code of Cost Moderation." (See a letter to the editor on this subject in this issue of the JOURNAL

That code reflects the fact that the physician community must assume a position of leadership in efforts to control the cost of medical care. It encourages each physician to take the initiative in assuming the responsibility for actively and consciously inhibiting the rising cost of medical care.

We must strive to become more keenly aware of the true cost of hospital rooms, tests and other medical services we routinely order. We must utilize outpatient testing, whenever we can, to be more efficient and reduce costs to the patient.

We must demonstrate, document and discuss cost-saving practices in daily patient care, and we must encourage third-party payors to expand their policies to cover ambulatory service.

We must encourage our hospital medical staff committees to intensify and broaden their involvement in cost-containment activities, and we must recognize the importance of — and volunteer for — physician participation in hospital and medical society cost-containment activities and committees, as well as efforts in coalitions involving business, labor and the insurance industry.

We must become aware of, and utilize, those business and industry programs that provide "light work option" alternatives instead of "disability time off," and other similar cost-saving programs.

We must always remember that, as physicians, our first priority is to the provision of quality medical care — but with an awareness of the cost associated with it so that benefits will continue to accrue to our patients.

Much of the difficulty that we face in the hospital arena, where 41% of all health care costs occur, is related to past reimbursement mechanisms that were essentially cost-plus reimbursement mechanisms. The hospital administrator was willing to add new equipment, new devices, and new procedures, almost whenever we asked for them, since these expenses could automatically be built into the cost base and be reimbursed.

In California, where the Medicaid system is called Medi-Cal, we now have an arrangement whereby Medi-Cal negotiates directly with hospitals for a specific rate for a Medi-Cal admission, regardless of the diagnosis. Most hospitals have complied. Where once administration favored the physician who ordered the most laboratory tests and X-rays, now, for Medi-Cal patients, they favor the one who orders the least.

Medicare has seen that light, and we are now part way through the process of converting to reimbursement of hospitals on the basis of DRGs, or Diagnosis-Related Groups. Under this system, the hospital is paid a set amount of money for the diagnosis, regardless of the length of stay and regardless, with some exceptions, of the complexity of the case.

However, it is now clear that the daily rate negotiated with Medi-Cal by many hospitals is below the cost of providing the care. Many suspect that this will be the experience with DRGs where Medicare is concerned, although not all evidence is in.

In any case, with Medi-Cal, the net result is cost-shifting by finding ways to add the Medi-Cal losses on to the bills of those with private insurance or other non-governmental support. Many suspect that this also will be the case with DRGs.

It was this concern that led the California legislature, under heavy pressure by the insurance industry, to pass legislation allowing private entities, such as Blue Cross, Blue Shield and insurance companies, to contract with physicians. They saw this ability as critical in preventing cost-shifting.

This has led to a significant boost in both the HMO movement and the PPO



movement, with the Blue Cross Prudent Buyer Plan and the Blue Shield Preferred Provider Plan being in the lead.

Theoretically, patients in either plan have free choice of a physician. However, the use of a physician not a member of the plan results in a lower level of reimbursement, with the patient having to make up the difference. Use of a hospital not designated in the plan has the same result.

So we see third-party payors contracting with physicians, or groups of physicians, to provide services at a discounted rate and those same plans contracting with the hospitals for a similarly discounted rate.

There are two unfortunate incentives in all of this activity. For the physician, the incentive is fear — fear that he or she will lose patients because they will not continue as private patients unless the physician is a member of the plan with which they have coverage. The other incentive is monetary gain, and here we have the rising involvement of for-profit corporations in the delivery of health care.

In all of the discussion about health care, there are comparisons that suggest that the cost of medical care has risen faster than other costs. These comparisons are misleading, for they ignore a vital and often overlooked distinction.

The cost increase of most goods and services has been for products that were available before but were cheaper then, while today's medical care is very different from that available 20, 15, 10, or even five years ago. Today's medical care is costlier than yesterday's, but it is a far superior product.

We should not be fooled by false comparisons of medical care costs with food, housing or clothing costs. The medical services available today were not to be had at any price in the past.

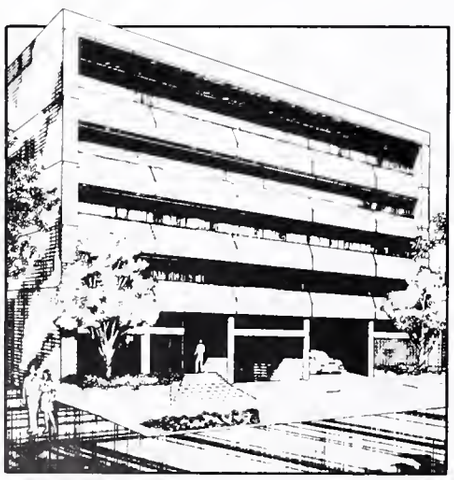
While we are on that theme, it is fascinating to observe that there is elation about the benefit to the economy when the number of new housing starts rises, and when automobile sales go up. Are jobs provided by the health care industry any less desirable than those provided by the housing, automobile or steel industries? And why is it a sign of economic decadence if a country decides to spend more on health and less on something else?

Let's try to sum all of this up. In this I am helped by an editorial by Dr. Malcolm Watts in the Western Journal of Medicine last fall.

Yes, we agree that America has the finest and best medical care the world has ever seen. Yes, we agree that its expense has become a problem for all

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concerned. Those who must pay these increasing costs now rebel and demand that these costs be controlled or reduced.

These demands really do not emanate from we who provide the care or from the patients who receive it. Those who make the demands do not seem overly concerned about the effect cost reductions may have on quality or availability of needed care and services.

They are the third parties progressively more remote from the human and professional aspects of medical care. They are not the doctors and patients and, for this reason, the interventions by third parties — and I include government — seem aimed primarily at reducing costs, seem out of touch or insensitive to what health is all about, and seem oblivious to the danger of wrecking a most effective health care system.

We have tried to describe how all of this happened and to consider what, if anything, physicians can do about it.

As we've said, our current health care costs, which some seem to find unacceptable, have been rising for some time.

As we've said, the reason is success — the success of our medical profession in developing and applying unprecedented advances in medical science, and the success of our society in making real progress toward equal access to mainstream health care for all. These successes are familiar to all of us.

Include new services and technology, include a lower infant mortality, include a longer length of life and, of course, include the fact that those older than 65 use three times the health care resources used by those between 40 and 65.

A massive involvement by third parties, both public and private, in financing delivery of health care has spawned much costly legislative, regulatory, administrative and judicial involvement with rules, regulations and laws.

And we must not forget the great number of expensive tort and other court actions brought against doctors and others in the health care system in the recent past. All of this has had the effect of bringing yet other kinds of third parties into the health care equation.

Most recently, and paradoxically, in the name of cost-containment, profit-making in providing health care has been blessed as a good thing, as have open competition in and costly marketing of health care services. It is no wonder that health care costs have been rising. Indeed, it is quite predictable that they would.

Perhaps of equal or even greater importance to cost-consciousness, cost-awareness and cost-effectiveness are continuing efforts toward education of the public as to the value that today's health dollar buys — something that was not available a short time ago, at any price.

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From the Kahuna Lapa'au

"Hey, doc, I bin get da kine 'strep throat!' "

"Oh, yeah? How you savvy? You one doctah?"

Strep throat is something the public loves to claim nowadays; it sounds important, it impresses listeners as being something terrible so as to elicit their sympathy. The patient tells his doctor to impress him, too, that it is indeed an emergency.

"Lemme look you throat. Open da mouth and make noise allsame a-a-ah! OK. I see red inside. Get too much eha, suppose you drink water, or kau kau?"

"Yeah, doc. Me no can kau kau. Get plenty sore head. Aspirin no help."

"OK. I no can tell if you get 'strep throat.' But, I tell you dat 90% sore throat come from virus, not from strep. You savvy what mean strep?"

"Sure, doc. It mean I goin' get heart trouble — what you call — rheumatic fever!"

"Hey, you one smart buggah! Suppose you really get 'Streptococcus' — special kind bacteria no can see except under da microscope — den, maybe can get RF, or kidney trouble. I goin' find out. Open you mouth one mo' time and I goin' take 'culture' with dis stick and cotton fo' send to da lab for dem to cultivate and grow and identify. I get report maybe one, two days."

"Doc. I no like tell you how you do you bizness, but I goin' suffer one, two days mo'? Not goin' give me medicine?"

"Nah! I goin' give you one poke on top da kuu right now. Hemo da pants! Nurse, get one beeg needul?"

"Auwe! Auwe! My okole sore like hell!"

"Ten bananas, please!"

Footnotes to the above:
eha = pain
kau kau = food
kuu = buttock
hemo = take off
okole = butt

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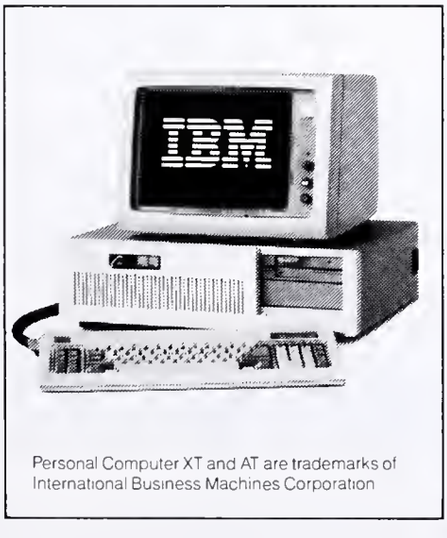
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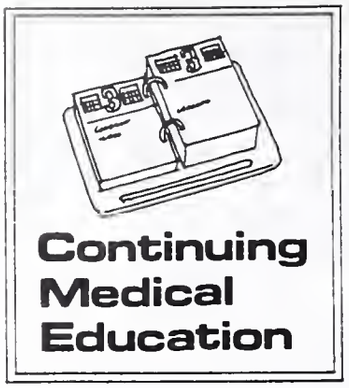
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LOCAL ACCREDITED PROGRAMS
ONGOING

American Cancer Society, Hawaii Pacific Division, Inc.

1. Melanoma and Other Skin Lesion Tumor Board, Fourth Tuesday, 12:30-1:30 p.m., Queen's University Tower, Room 504.
2. Windward Oncology Conference, Second Tuesday, 12:30-1:30 p.m., Castle Medical Center Auditorium.
3. "Castle Cases," Fourth Tuesday, 12:30-1:30 p.m., Castle Medical Center Auditorium.

John A. Burns School of Medicine

1. Department of Medicine
 - *A. Case Conferences, Second and Fourth Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
 - *B. Grand Rounds, First and Third Tuesdays, 12:30-2 p.m., Queen's University Tower, Room 618.
 - C. Endocrinology Grand Rounds, First Tuesday, 5:30-6:30 p.m., Queen's University Tower, Room 506.
 - D. UH-Queen's Conference, Every Friday, 8-9 a.m., Queen's Medical Center, Mabel Smyth Auditorium.
 - E. Cardiology Grand Rounds, Third Tuesday, 6:30-7:30 p.m., Queen's University Tower, Room 508.
 - F. Infectious Disease Grand Rounds, First and Third Thursdays, 5-6 p.m., Queen's Nalani I Conference Room.
 - G. Dermatology Grand Rounds, Second Wednesday, 7:30-9:30 a.m., Queen's Medical Center, Queen Emma Clinic.
 - H. Pulmonary Grand Rounds, Fourth Monday, 12:30-1:30 p.m., Queen's Medical Center, Kamehameha Lounge.
 - I. Nuclear Medicine Grand Rounds, Third Wednesday, 5-6:30 p.m., Straub Clinic & Hospital, Doctors' Dining Room.
 - J. Medical-Surgical GI Grand Rounds, Third Friday, 12:45-1:45 p.m., Kuakini Hospital, PB4 Classroom.
 - K. Rehabilitation Hospital of the Pacific Grand Rounds, First and Third Thursdays, 7:30-8:30 a.m., Rehab. Conference Room, First Floor.
2. Department of Obstetrics and Gynecology
 - *A. Grand Rounds, Wednesdays, 7:30-8:30 a.m., Kapiolani Women's and Children's Medical Center, Second Floor Auditorium.
 - B. Tuesday Conference, Tuesdays, 1-2 p.m., Kapiolani Women's and Children's Medical Center, Second Floor Auditorium.
3. Division of Orthopedics
 - A. Fracture Conference, Mondays, 5-6 p.m., Queen's University Tower, Room 618.
 - B. Shriner's Tuesday Conference, Tuesdays, 7:15-8:15 a.m., Shriners Children's Hospital, Auditorium.
4. Department of Pediatrics
 - A. Grand Rounds, Thursdays, 8-9 a.m., Kapiolani Women's and Children's Medical Center, Second Floor Auditorium.
 - B. Monday Noon Conference, 12:45-1:45 p.m., Kapiolani Women's and Children's Medical Center, Second Floor Auditorium.
 - C. Pediatric Infectious Disease Conference, Thursdays, 12:30-1:30 p.m., Kapiolani Women's and Children's Medical Center, Third Floor Conference Room.
 - D. Perinatal Grand Rounds, Fridays, 8:15-9:15 a.m., Kapiolani Women's and Children's Medical Center, Conference Room B.
5. Department of Psychiatry
 - A. Grand Rounds, Fridays, 8-9:30 a.m., Queen's University Tower, Room 618.
6. Department of Surgery
 - A. Grand Rounds, First, Second, and Third Saturdays, 7:30-9 a.m., rotating hospitals.
 - B. Statistical M&M, Last Saturday, 7:30-9 a.m., rotating hospitals.
 - C. Journal Club, First and Third Tuesdays, 6-8 p.m., Queen's University Tower, Room 620.
 - D. Medical-Surgical GI Grand Rounds, Third Friday, 12:45-1:45 p.m., Kuakini Medical Center, PB4 Classroom.
 - E. Pediatric Surgical Grand Rounds, First Friday, 12:45-1:45 p.m., Kapiolani Women's and Children's Medical Center, Conference Room B.
 - F. Basic Science Lecture, Wednesdays, 7:15-8:15 a.m., Queen's University Tower, Room 618.
7. Department of Family Practice
 - *A. Conference, Fourth Tuesday, 1-2 p.m., Kapiolani Women's and Children's Medical Center, Executive Dining Room.
8. Department of Pathology
 - A. Neuropathology Conference, First Saturday, 8-9 a.m., St. Francis Hospital, Sullivan IV Classroom.

 For further information on any of these programs, please call the Continuing Medical Education office at 948-6949.

Castle Medical Center

1. CME Programs, First and Third Tuesday, 12:30-1:30 p.m., Castle Medical Center's Auditorium. (For further information call the Medical Staff Office, 263-5360.)
2. CME Programs, Thursdays, 8-9 a.m. Topics and visiting professorships to be announced.

 For further information, or to be placed on the mailing list, contact CHART Comprehensive Health and Rehabilitation Training at 523-1674.

G.N. Wilcox Memorial Hospital

1. General Medical Staff Meeting, Quarterly in January, April, July, and October, 7:30 p.m., Hospital Conference Room.
2. Clinical Review, Mondays, Noon-2 p.m., Hospital Conference Room.
3. Physicians' Tumor Conference, First Thursday, Noon-2 p.m., Hospital Board Room.

Hawaii Medical Association

1. HMA Maternal and Perinatal Mortality Study Committee, First Monday, 5:30 p.m., 320 Ward Ave., Suite 200, Cat. 1 on hr. for hr. basis. (Call 536-7702 to confirm meeting schedule.)

Hawaii Ophthalmological Society

1. Monthly Dinner Meeting, Third Thursday of each month (except July, August, and December), 6:30-9:30 p.m., The Pacific Club.

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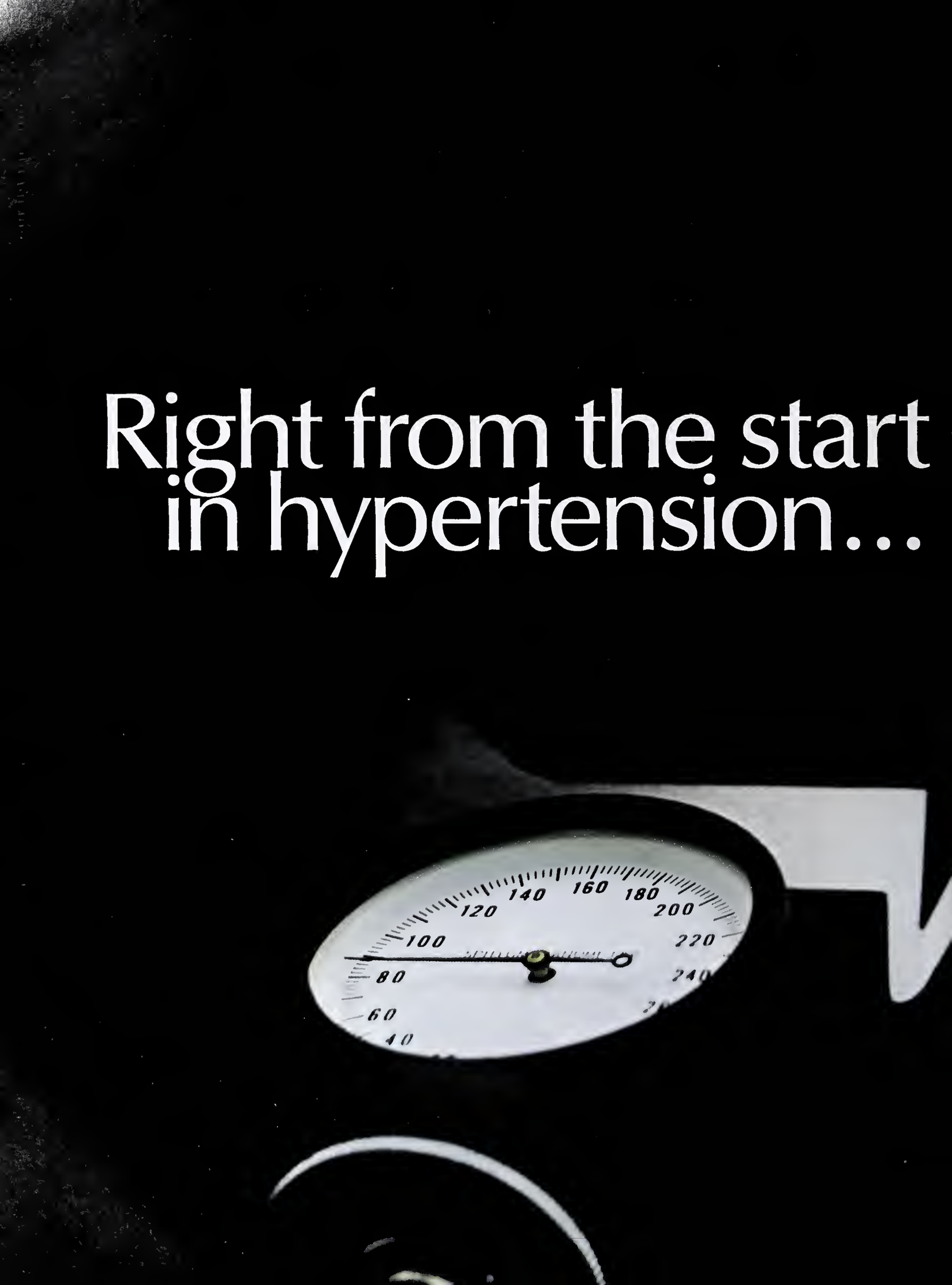
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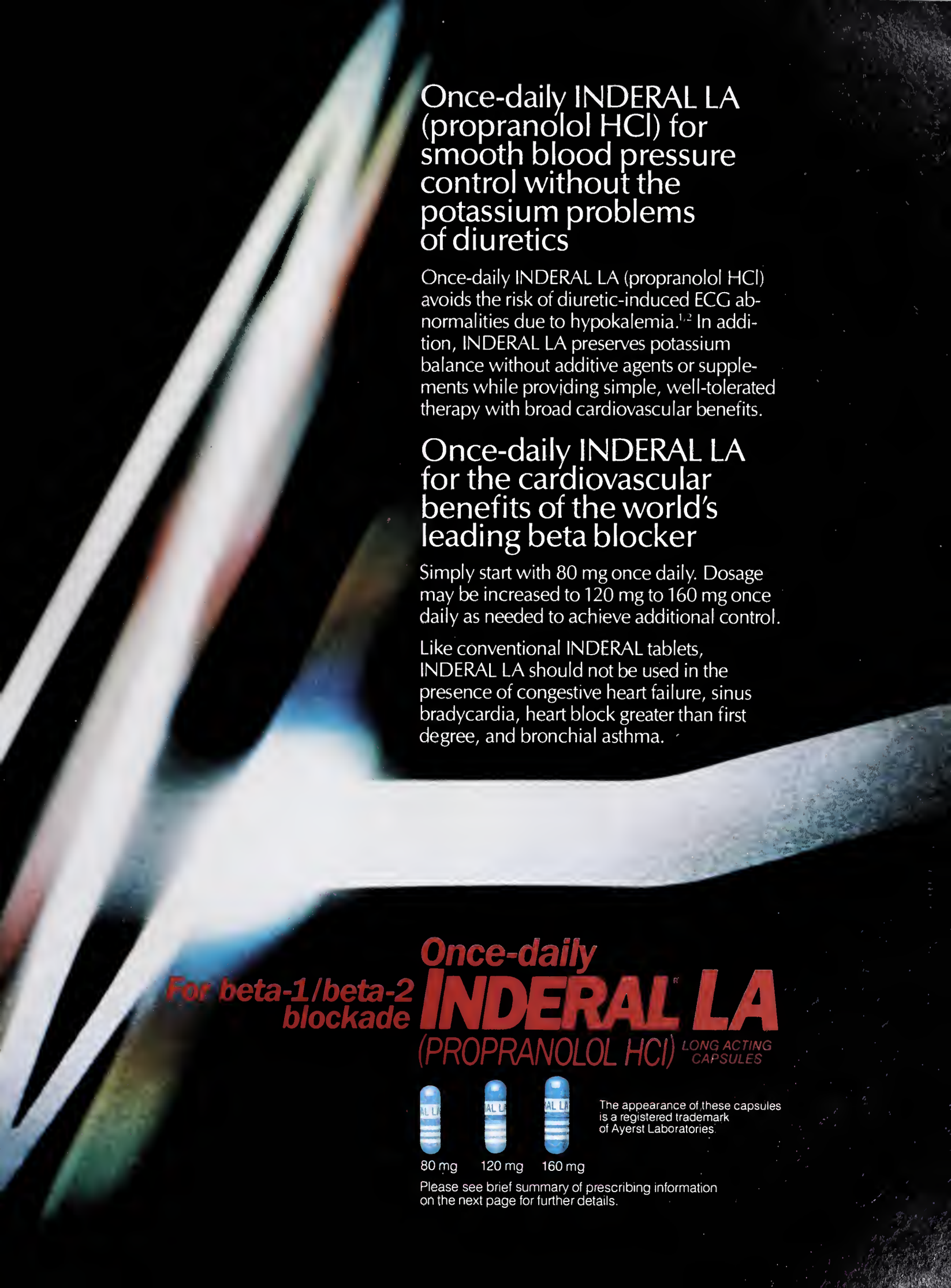
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80 mg 120 mg 160 mg

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Please see brief summary of prescribing information on the next page for further details.

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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY. The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA. Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS. Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General.* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests. Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS. Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility. Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension; paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia; visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299

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CALENDAR OF ACCREDITED EVENTS — CATEGORY 1

(Continued from page 360)

Hawaii Thoracic Society

1. April 1986 — Visiting Professorship Program Statewide, tentative speaker: Phil Gold, MD.
2. Sinclair Chest Club Quarterly Dinner Meetings, January, April, July, and October. Call Rosemary Respicio, BSU, at 537-5966 for dates and speakers.

Hilo Hospital

1. Radiology Conference, First Friday, 12:30-1:30 p.m., Doctor's Conference Room.
2. Tumor Conference, Second Friday, 12:30-1:30 p.m., Doctor's Conference Room.
3. Cardiology Conference/Clinical Department Update for Medical Staff, Third Friday, 12:30-1:30 p.m., Doctor's Conference Room.
4. Pathology Conference/Morbidity-Mortality Review, Fourth Friday, 12:30-1:30 p.m., Doctor's Conference Room.
5. Visiting Professor Program/Network for Continuing Medical Education Tapes (ETV), Saturdays, 7-8 a.m., Doctor's Conference Room.

 For further information call Administration at 961-4255.

Kaiser Foundation Hospital

1. Obstetrics/Pathology Conference, First Monday, 8-9 a.m., Garden Lanai, Pacific Building.
2. *Medicine Grand Rounds, Tuesdays, 8-9 a.m., Auditorium, Pacific Building.
3. Tumor Board, Tuesdays, Noon-1 p.m., Auditorium, Pacific Building.
4. Orthopedic Conference, every Wednesday, 9:30-10:30 a.m., Garden Lanai, Pacific Building.
5. *Family Practice Grand Rounds, Fourth Thursday, 7:45-8:45 a.m., Library, Pacific Building.
6. Pathology Conference, Fridays, 7-8 a.m., Auditorium, Pacific Building.
7. Surgical Grand Rounds, Fridays, 8-9 a.m., Auditorium, Pacific Building.
8. *Saturday Educational Conference, Saturdays, 7:30-9 a.m., Auditorium, Pacific Building. (Call CME office at Kaiser for more information.)
9. Obstetrics/Perinatal Conference, Last Tuesday, 8-9 a.m., Garden Lanai, Pacific Building.

 (Call CME Office at Kaiser Moanalua after Oct. 1, 1985 for relocation of conferences.)

Kuakini Medical Center

1. Visiting Professor Lectures (ongoing).
2. Guest Lectures (ongoing).
3. Endocrine Conference, Second Monday, 12:30-1:30 p.m., Makai Conference Room.
4. Nephrology Conference, Third Monday, Noon-1 p.m., Makai Conference Room.
5. Department of Ophthalmology Meeting, First Tuesday, 12:30-1:30 p.m., Private Dining Room.
6. Medical Mortality and Morbidity Conference, Fourth Tuesday, 1-2 p.m., Hale Pulama Mau Auditorium.
7. Neurology Conference, First Wednesday, 12:30-1:30 p.m., Makai Conference Room.
8. G.I. Conference, Second Wednesday, 12:30-1:30 p.m., Makai Conference Room.
9. Infectious Disease Conference, Third Wednesday, 12:30-1:30 p.m., Makai Conference Room.
10. Oncology Conference, Thursdays, 7:30-8:30 a.m., PB-5 Conference Room.
11. Oncology Conference, First Thursday, 12:30-1:30 p.m., Makai Conference Room.
12. Pulmonary Conference, Second Thursday, 1-2 p.m., Makai Conference Room.
13. Rheumatology Conference, Third Thursday, 12:30-1:30 p.m., Makai Conference Room.
14. Cardiology Conference, Fourth Thursday, 12:30-1:30 p.m., Makai Conference Room.
15. Surgical Conference, First Friday, 12:45-1:45 p.m., PB-5 Conference Room.
16. Surgical Trauma Conference, Second Friday, 12:45-1:45 p.m., PB-5 Conference Room.
17. Nutrition Conference, Fourth Friday, 12:30-1:30 p.m., Private Dining Room.
18. Surgical Mortality and Morbidity Conference, Fourth Friday, 12:45-1:45 p.m., PB-5 Conference Room.

Maui Memorial Hospital

1. Department of Medicine, First Thursday, 7-8 a.m., Auditorium.
2. Department of Surgery, Second Thursday, 7-8 a.m., Auditorium.
3. Department of Obstetrics & Gynecology, Third Thursday, 7-8 a.m., Auditorium.
4. Department of Pediatrics, Fourth Thursday, 7-8 a.m., Auditorium.
5. Fifth Thursday Meeting: 7-8 a.m., Auditorium.
6. Tumor Board Conference; Second Friday and Fourth Wednesday, 7-8 a.m., Multi-Purpose Room.
7. Anesthesia Conference, Second Wednesday, 7-8 a.m., Dining Room.

The Queen's Medical Center

1. QMC Cardiology Rounds, Wednesdays, 9-10 a.m., Kam Auditorium.
2. Emergency Medicine Conference, First Monday, 7-8 a.m., Harkness Board Room.
3. ENT Conference, First and Second Fridays, 7:30-8:30 a.m., Small Dining Room.
4. QMC-UH Medical Conference, Fridays, 8-9 a.m., Mabel Smyth Auditorium.
5. MICU Lecture, Tuesdays and Thursdays, 9-10 a.m., Pauahi 6.
6. OB/GYN Conference, Mondays, 1-2 p.m., Kam Auditorium.
7. Ophthalmology Conference, Fourth Tuesday, 4:45-6 p.m., Queen Emma Eye Clinic.
8. Orthopedic Conference, Wednesdays, 7-8 a.m., Kam Auditorium.
9. Pathology Conference, Wednesdays, 7-8 a.m., Nalani I Conference Room.
10. Pediatrics Conference, Fourth Thursday, 12:30-1:20 p.m., Harkness Board Room.
11. Psychiatry Conference, Fourth Tuesday, 7:30-8:30 a.m., Kekela Gym.
12. Surgical Conference, Tuesdays, 4:30-5:30 p.m., Kam Auditorium.

St. Francis Hospital

1. Oncology Conference, Mondays, 7:30-8:30 a.m., Sullivan IV Classroom.
2. EENT Meeting, First Tuesday, 7:30-8:30 a.m., Sullivan IV Classroom.
3. Surgery Grand Rounds, First, Second, and Third Fridays, 7:30-8:30 a.m., Sullivan IV Classroom.
4. Medicine Morbidity and Mortality Conference, Second Tuesday, 7:30-8:30 a.m., Auditorium (for SFH staff members only).
5. Hematology Conference, Third Thursday, 12:30-1:30 p.m., Sullivan IV Classroom.
6. Visiting Professor Programs (contact Medical Education Office at 547-6497 for further information).

Straub Clinic & Hospital

1. Friday Noon Conference, Fridays, 12:30-1:30 p.m., Doctors' Dining Room.
2. Patient Care Conference, Second Tuesday, 5-6 p.m., Doctors' Dining Room.
3. Cardiac Surgery Conference, Fourth Tuesday, 4:30-5:30 p.m., Doctors' Dining Room.
4. Community Peripheral Vascular Conference, Third Thursday, 5-6:30 p.m., Doctors' Dining Room.
5. Neuropathology Conference, Fourth Saturday, 8-9 a.m., Doctors' Dining Room.
6. Surgical Morbidity and Mortality Conference, Fourth Thursday, 7-8 a.m., Doctors' Dining Room.
7. Department of Anesthesiology, Second Tuesday, 7-8 a.m., Doctors' Dining Room.
8. Visiting Professor Conference, periodically on Thursday, 7-8 a.m., Doctors' Dining Room. (For further information call the Office of Professional Activities, 523-2311, ext. 8152.)

 *Note: All conferences are subject to change. Monthly calendar is available upon request.

Wahiawa General Hospital

1. CME Program, Tuesdays, 1-2 p.m., Conference Room.

Over The Editor's Desk

(Continued from page 350)

Gerald D. Faulkner, MD, of Honolulu, has been chosen to participate in the clinical evaluation of a new soft, foldable intraocular lens, it was announced by STARR Surgical Co. of Monrovia, Calif., developer of the breakthrough product. He is one of a select group of ophthalmologists across the nation working with the new device, which is designed to replace the natural eye lens after it has been surgically removed because of clouding by a cataract. Dr. Faulkner, a graduate of the University of Alabama Medical College, has offices at 1100 Ward Ave. in Honolulu. He limits his practice to general eye care and in-office cataract surgery and has performed more than 3,600 cataract and implant surgeries.

Called the ELASTIC LENS implant, the lens is made of a proprietary medical-grade silicone and may be folded to fit through a three-millimeter (1/8-inch) incision, half the size of that required by standard hard lens. The soft material and smaller incision mean faster physical rehabilitation and a quick return to corrected vision. The ELASTIC LENS is in the clinical evaluation stage of the FDA clearance process. The lens was designed by Dr. Thomas R. Mazzocco, a leading U.S. ophthalmologist who practices and does research in Van Nuys, Calif., near Los Angeles.

* * *

Last year the Advanced Test Reactor (ATR), operated by EG&G Idaho at the Department of Energy's Idaho National Engineering Laboratory, produced nearly 1 million curies of cobalt 60. A valuable and beneficial radioisotope, cobalt 60 is used for cancer radiation therapy, food irradiation, sterilization of bandages and other medical supplies, sewer-sludge irradiation (so the product can be marketed as fertilizer), and industrial radiography (similar to X-ray processes) for examining welds in containers and other objects. EG&G, Inc., 45 William St., Wellesley, Mass. 02181. (617) 237-5100.

* * *

A study, "C-Reactive Protein as an Indicator of Infection Relapse in Patients with Abdominal Sepsis," by Jerome J. Schentag, PharmD, et al. discusses the use of CRP to monitor 97 seriously ill patients on antibiotic therapy. A reprint of this article is available on request from Beckman Instruments, Inc. It originally appeared in the March 1984 Archives of Surgery. CRP, an acute phase protein, shows a rapid rise and up to a hundredfold increase over normal levels in serum following severe trauma. It also decreases rapidly as inflammation or tissue damage abates. The study tracks CRP levels over time in patients with abdominal sepsis and was the basis for discontinuing antibiotic therapy. A reprint of the paper is available from Beckman. Specify Bulletin R-523, "C-Reactive Protein as an Indicator of Infection Relapse in Patients with Abdominal Sepsis." Beckman Instruments, Inc., Diagnostic Systems Group, 200 South Kraemer Blvd., Brea, Calif. 92621.

* * *

Abbott Laboratories, the world's leading supplier of diagnostic products, has introduced a fast, accurate, easy-to-use desktop blood analyzer that is expected to rapidly accelerate growth in the market for physicians' office testing. The fully automated system, called *Vision,* provides results for routine tests in just eight minutes from whole blood. The unprecedented speed of *Vision* means patients can get results before leaving the doctor's office, and physicians can prescribe or adjust medications without waiting days for results from outside laboratories.

* * *

CPHA, Ann Arbor, Mich., has announced that AccuCode, the software that converts medical terminology to ICD-9-CM codes, is now available for IBM-PCs and compatible personal computers. With AccuCode/PC, the user enters medical terminology for diagnoses and procedures and the system arrives at the appropriate ICD-9-CM code. For further information on AccuCode/PC call the sales department at CPHA (313) 769-6511 or write CPHA, P.O. Box 1809, Ann Arbor, Mich. 48106.

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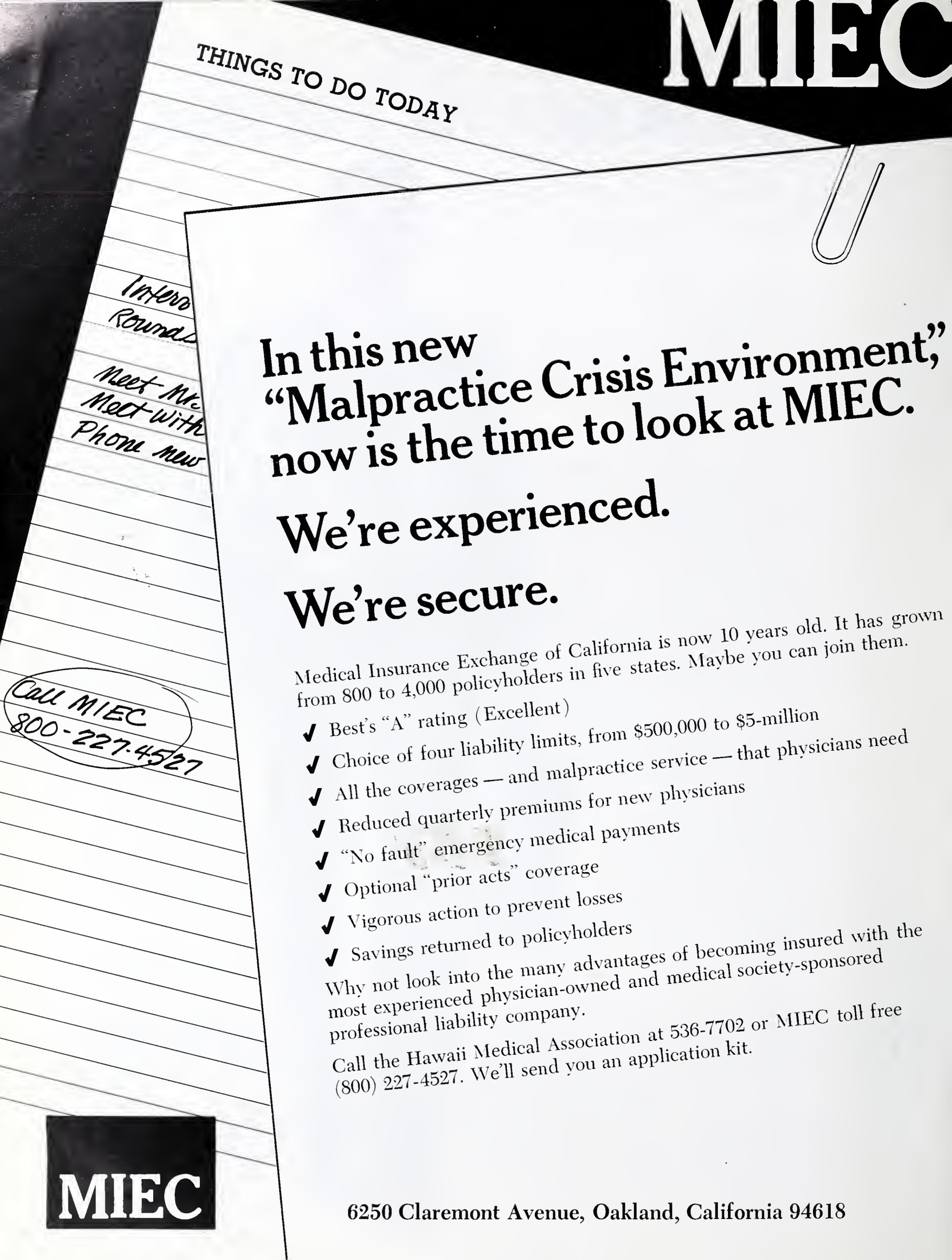
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CONTENTS

Editorials: 373
This Is My Mana'o
J.I. Frederick Reppun, MD
Guest Editorial
Russell T. Stodd, MD
AIDS
J.I. Frederick Reppun, MD

Hawaii Academy of Family Physicians' Newsletter 378
Don and Marlies Farrell

Over The Editor's Desk 380
J.I. Frederick Reppun

Replantation in the Upper Extremity: A Six-Year Experience in Hawaii 384
James R. Doyle, MD

From The Kahuna Lapa'au 386

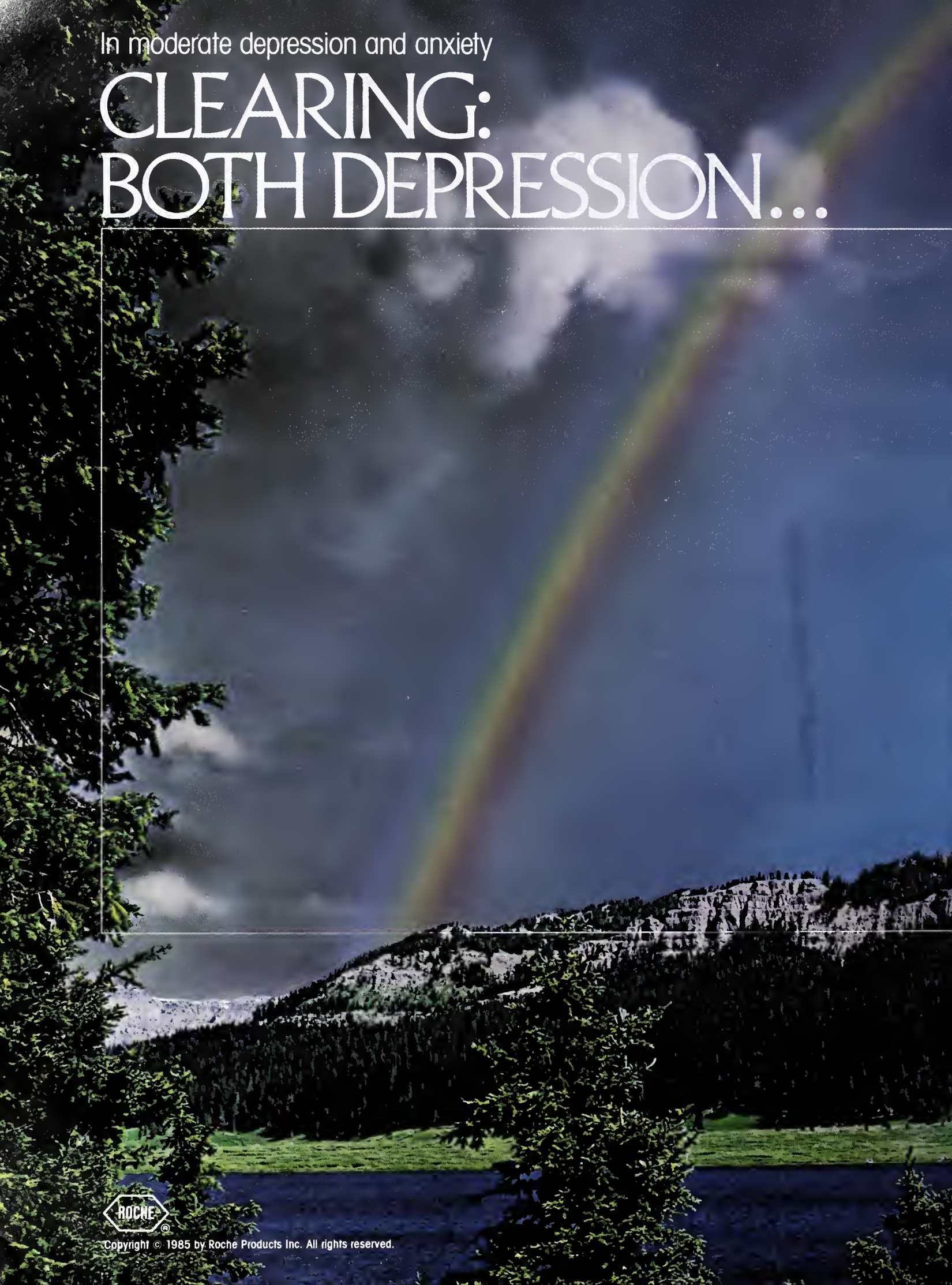
Male Predominance in Persistent Staphylococcal Colonization and Infection of the Newborn 389
R.W. Enzenauer, MD, MPH, MAJ, MC; C.R. Dotson, CPT(P), MSC; T. Leonard, MD, LTC, MC; L. Reuben, MD, MAJ, MC; J.W. Bass, MD, COL, MC; J. Brown III, MD, COL, MC

Liver Biopsies of Blood Donors With Elevated Alanine Aminotransferase (ALT) 398
Thomas Reppun, MD, and Amod Jain, MD

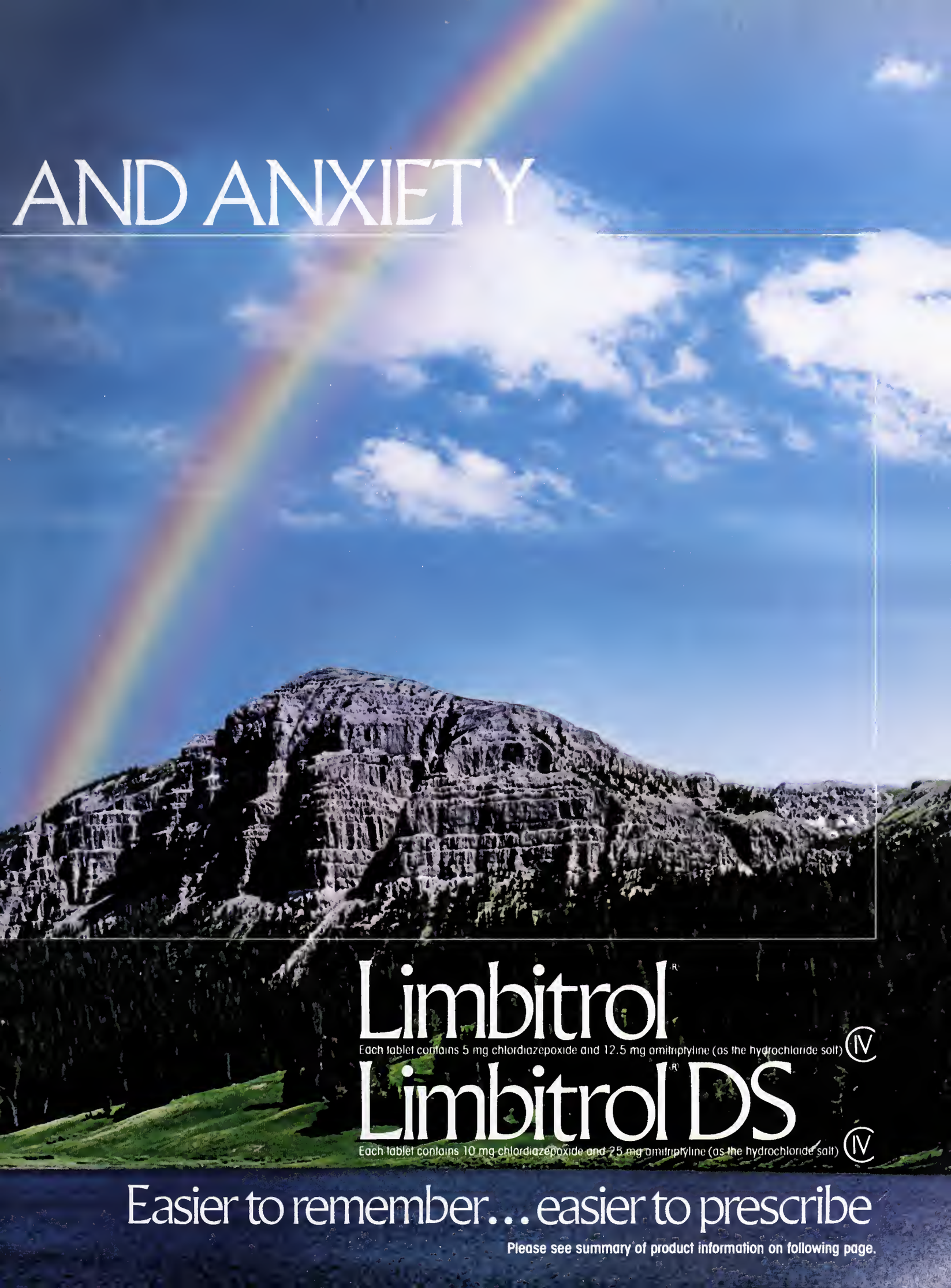
Continuing Medical Education 404

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients. (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving).
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Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide).
Precautions: Use with caution in patients with a history of seizures, in hyperthyroid patients or those on thyroid medication, and in patients with impaired renal or hepatic function. Because of the possibility of suicide in depressed patients, do not permit easy access to large quantities in these patients. Periodic liver function tests and blood counts are recommended during prolonged treatment. Amitriptyline component may block action of guanethidine or similar antihypertensives. When tricyclic antidepressants are used concomitantly with cimetidine (Tagamet), clinically significant effects have been reported involving delayed elimination and increasing steady state concentrations of the tricyclic drugs. Concomitant use of Limbitrol with other psychotropic drugs has not been evaluated, sedative effects may be additive. Discontinue several days before surgery. Limit concomitant administration of ECT to essential treatment. See Warnings for precautions about pregnancy. Limbitrol should not be taken during the nursing period. Not recommended in children under 12. In the elderly and debilitated, limit to smallest effective dosage to preclude ataxia, oversedation, confusion or anticholinergic effects.
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Psychiatric: Euphoria, apprehension, poor concentration, delusions, hallucinations, hypomania and increased or decreased libido.
Neurologic: Incoordination, ataxia, numbness, tingling and paresthesias of the extremities, extrapyramidal symptoms, syncope, changes in EEG patterns.
Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic: Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
Endocrine: Testicular swelling and gynecomastia in the male, breast enlargement, galactorrhea and minor menstrual irregularities in the female, elevation and lowering of blood sugar levels, and syndrome of inappropriate ADH (antidiuretic hormone) secretion.
Other: Headache, weight gain or loss, increased perspiration, urinary frequency, mydriasis, jaundice, alopecia, parotid swelling.
Overdosage: Immediately hospitalize patient suspected of having taken an overdose. Treatment is symptomatic and supportive. I.V. administration of 1 to 3 mg physostigmine salicylate has been reported to reverse the symptoms of amitriptyline poisoning. See complete product information for manifestation and treatment.
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Editorials

This is My Mana'o

Much of the July 12, 1985, council meeting's time was given over to a serious internal problem — the sort of thing that physicians in general find difficult to deal with: to discipline one of their own. First, there is a long search for the facts; truth is not easy to come by. Next comes the question of throwing stones when one lives in a glass house; outsiders castigate our profession with the term "Honor amongst thieves," not understanding that we are innately sympathetic with any one of us who is up against a judgmental decision. The bottom line is "due process." That's why we need astute lawyers to help us.

Organized medicine — American Medical Association, state medical associations and the county societies — has attracted less than 50% of the physicians in the U.S.A. to join and put their shoulders to the wheel, reports President Bill Hindle, MD. In order to have clout these days, in dealing with the feds who are trying to run our show, we need numbers. E pluribus unum. The American Medical Association is to go all out to recruit members and drag them in. Interestingly, it may not be the AMA dues, projected to go up to $375 per annum in 1986, that deter; state and county dues have risen higher and more often, yet membership grows. Is this an indication of preference for homerule? When asked, he said there are only four states that have "unified membership"; Hawaii forsook their company several years ago.

James Todd, MD, chairs the AMA's MMPI Committee. Hindle capsulized its report at the annual meeting in June:

In 1984, there were 8.6 lawsuits per 100 MDs; there was a 42% increase in "defensive" medicine. 95% of the suits that do go to court are indeed the result of medical practice. The largest cost component lies at the feet of the defense.

In New Jersey, 40% of the admissions to a teaching hospital were for iatrogenic illness and 90% of those were life-threatening illnesses, with a mortality of 20%, i.e. 1 of 12.

Todd emphasized the point: "Medicine needs to clean up its own act!"

Sobering statistics, n'est-ce pas?

☆ ☆ ☆

At the Aug. 2, 1985, council meeting, President Bill Hindle, MD, casually mentioned spending a weekend at the medical seat of power in Washington, D.C. — at HCFA.

The news, colored somber, that he brought back was that contracts have been let to three prestigious groups to conduct a 36-month assessment of the possibility of applying the PPS to physicians in their offices, i.e., out-patient DRGs as a way for the government to reimburse doctors treating Medicare and Medicaid patients. The three groups studying how it might work out are doing so separately: (a) AMA/Harvard, (b) ACS/Boston University, and (c) the Institute of Medicine (Washington, D.C.).

Hospital DRG reimbursements are to be reduced by 6.5% in 1986!

Neither PARS nor non-PARS are to receive "raises" in October 1985.

Readers, please peruse the HMSA's 11-year estimate of the number of practicing physicians in Hawaii, 1974 through 1984 — physicians who were counted as submitting at least one claim for services rendered to a HMSA subscriber — on page 377.

HMA estimates that circa 70% of these are members of the HMA/County Medical Society organization.

J.I. Frederick Reppun, MD
Editor

Guest Editorial

Remarks of Russell T. Stodd, MD, president-elect of the Hawaii Medical Association — May 17, 1985 — Delivered at the Annual Meeting of the Hawaii Public Health Association.

Speaking on behalf of the Hawaii Medical Association, may I express my gratitude to the HPHA for affording me the opportunity to speak before this gathering.

There can be little doubt that medical care in America is the best in the world, that it is now more productive than at any time in the past. Americans have more effective office, hospital, and emergency medical care than ever before. We have a better diet, are healthier, and are living longer. Life expectancy has rapidly increased to 74 years for the average American. Here in Hawaii, we enjoy a longer life expectancy than the rest of the nation. Kings, presidents and premiers from around the world come to America for their medical and surgical care, because it is recognized as the best. What then is the problem?

Part of the problem is our own success in providing that care. Our system of individual enterprise has encouraged an advancing technology which has challenged our ability to pay. We have equipment, devices, techniques and facilities which truly are capable of saving or preserving lives that would have been lost just a few years ago. The real question is how much Americans are willing to pay for their health care. We hear repeated references to 9% or 10% or 11% of gross national product. That is a statement which means nothing to the average American. He neither knows nor cares about GNP. He wants to know that he can have the best care when he is sick, and he wants to pay as little as possible for it. Recent studies by the socio-economic monitoring system of the AMA have shown that most Americans do not want to change the system; they just want it to be cheaper. They have come to recognize that there are many things the government cannot run well, and that a government-run medical system is neither cost-effective nor efficient. Yet they do want to see the cost of medical care controlled.

The most recent federal government invasion of the medical corpus is the DRG, or Diagnosis-Related-Group, theory. This plan employs a method of pricing hospital admissions by equating all hernias, hemorrhoids, hysterectomies, hirsutism, etc., wherever they may occur, as an admitting hospital diagnosis. It is an accountant's dream. Just fix the price, number the cases by diagnosis, extrapolate to hospitals in the U.S.A. and tell congress how much it will cost.

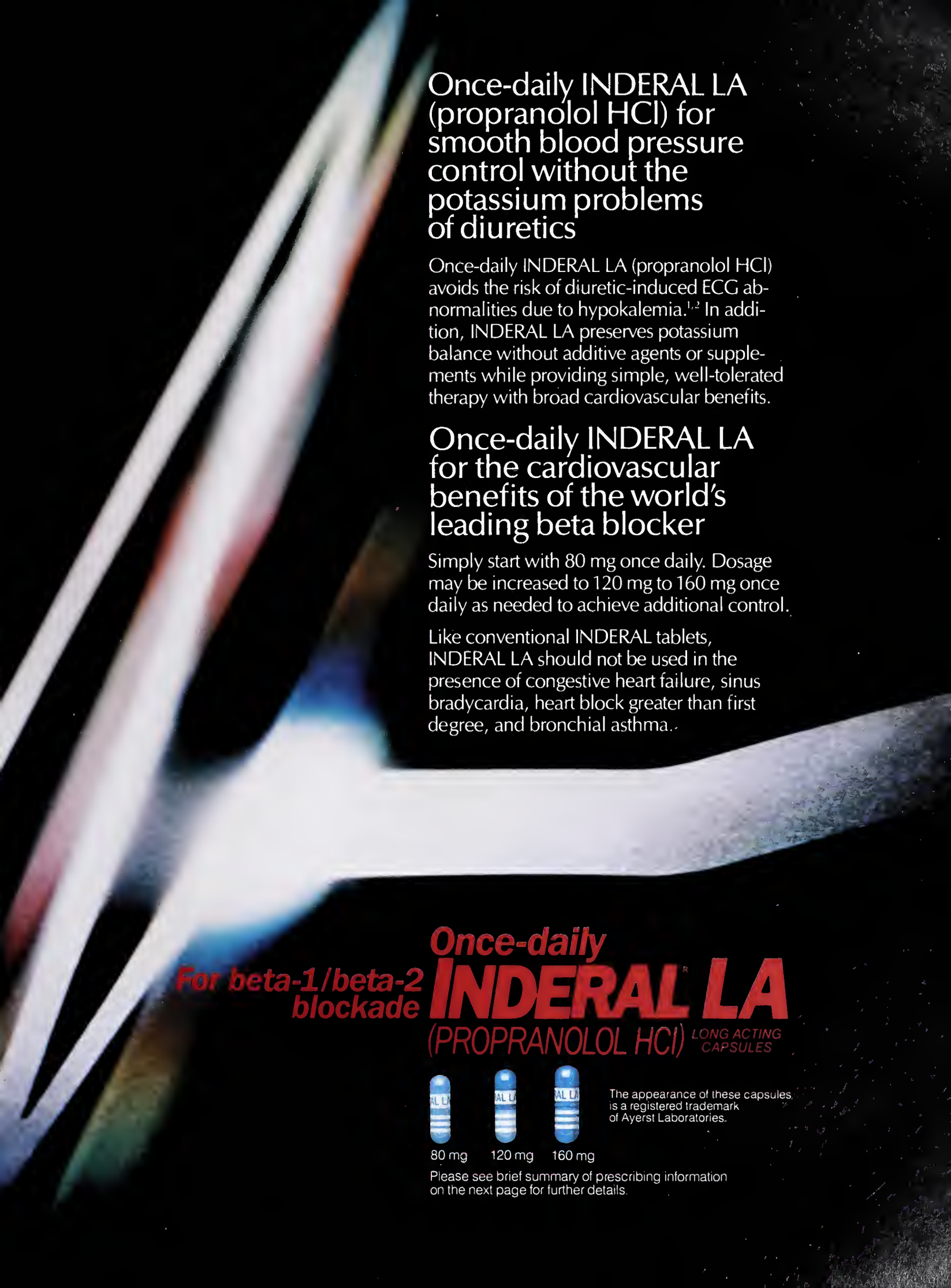
Please note that there is no allowance for variation in patient, or physician, and very little allowance for various facilities. There is certainly no mention of quality. Obviously, cheaper is better. Also, note that since it is purely numerical, hospitals will be rewarded for having more admissions. Seeing this, HCFA has established a physicians' review organization for medical reviewers to attempt to determine if, when and how hospitals and doctors may be cheating on the accountant's plan. What has happened — not in this state as yet — is that hospitals have subtly threatened doctors who fall below a given number of admissions. "A good doctor has many hospital patients." What nonsense!

Another part of our medical care cost problem is the profit-oriented hospital. American Medical International, Humana, and others are buying up hospitals around the country, rearranging the medical staff with their own people, and working for capital — make no mistake. What has happened is that medical care has been reduced to a simple marketplace function, where cost and cost alone is the deciding factor. Will a device make money? Buy it, and use it vigorously. Is that procedure too costly? Discard it.

We are caught up in a system where insurance carriers, government agencies, unions, business interests and hospitals are now openly interested in nothing except the dollar. So who cares for the patient? Who gives a darn about quality? Who demands the most appropriate drug, or procedure, or device? The doctor, that's who. I do not portray him or her as a saint or a knight in shining armor, or even anything exceptional. The

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Simply start with 80 mg once daily. Dosage may be increased to 120 mg to 160 mg once daily as needed to achieve additional control.

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For beta-1/beta-2 blockade

Once-daily

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80 mg 120 mg 160 mg

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Please see brief summary of prescribing information on the next page for further details.

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INDERAL® LA brand of propranolol hydrochloride **(Long Acting Capsules)**

DESCRIPTION. Inderal LA is formulated to provide a sustained release of propranolol hydrochloride. Inderal LA is available as 80 mg, 120 mg, and 160 mg capsules.

CLINICAL PHARMACOLOGY. INDERAL is a nonselective beta-adrenergic receptor blocking agent possessing no other autonomic nervous system activity. It specifically competes with beta-adrenergic receptor stimulating agents for available receptor sites. When access to beta-receptor sites is blocked by INDERAL, the chronotropic, inotropic, and vasodilator responses to beta-adrenergic stimulation are decreased proportionately.

INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension, it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE: Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely; or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)—PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose.

There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia; congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura; arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances; hallucinations; an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia. LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

REFERENCES

1. Holland OB, Nixon JV, Kuhnert L: Diuretic-induced ventricular ectopic activity. *Am J Med* 1981;70:762-768. **2.** Holme I, Helgeland A, Hjermann I, et al: Treatment of mild hypertension with diuretics. The importance of ECG abnormalities in the Oslo study and in MRFIT. *JAMA* 1984;251:1298-1299.

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doctor is just the only person in this equation who cares, and who is trying to protect the patient from the marketplace.

Are DRGs the answer to controlling the cost of medical care? I think not. It is a simplistic pricing system which does not make medical sense, and will not curb expenditures.

To be sure, the cost of an intensive care hospital day is massive and the cost of cardiac surgery is equally alarming. The cost of keeping a fragile newborn alive can be astronomical; the cost of maintaining an elderly stroke patient can be awesome. Should we then curtail these activities, as some countries do in Europe? Do we refuse to respond to technological advances? Who should decide how to ration the medical care dollar?

How much should medical care cost? I don't know. How much are Americans willing to pay for the best medical care in the world? That is a question they will have to answer. In this country of incredible wealth, where many families have two or three automobiles, where home video recorders are fast becoming commonplace, where hundreds of millions of dollars are spent on noisy electronic games and home computers, where the annual liquor bill would probably eliminate the national debt, one wonders: Are we really so far out of line on our expenditures for medical care?

AIDS

David McEwan, MD, is president of Life Foundation and director of family medicine at the Honolulu Medical Group. He spoke to some 35 family physicians and their consorts at the June 8, 1985, bimonthly dinner meeting of the Hawaii Chapter, AAFP, at the home of Don and Marlies Farrell in Heeia.

As the spearhead of Life Foundation, he is well qualified to speak on AIDS. Life Foundation is "a grassroots, non-profit, (501C3) tax-deductible, charitable organization . . . dedicated to providing services to people in Hawaii who have contracted AIDS, so that they can maintain their spirit, energy and dignity; it is also dedicated to educating the people of Hawaii about AIDS." (Its address is 320 Ward Ave., Suite 104, Honolulu 96814; its phone, 528-1919.)

McEwan told us that there were 55 cases in Hawaii, the number doubling every nine months. He said it was preventable, but that it had an incubation period of up to five years.

There were 11,000 cases in the United States, whereas there had been only 6,000 cases nine months earlier; mortality was 48%.

The CDC, said McEwan, estimated that probably a million people are infected with the HTLV-III virus, but that only 22% of those will get the disease.

The moral of McEwan's talk was that primary care physicians need to delve as deeply as they can into the sexual histories of their patients, and if there is any suspicion of potential infection, actual infection, or if the physician is uncomfortable about delving deeper, it is best to refer such cases to Life Foundation. Life Foundation's expertise in the "specialty" helps the patient go through a difficult and delicate process in order to obtain assurance one way or the other. Most physicians are unaware that 8-10% of the population is gay. The disease is no longer limited to certain populations, however.

J.I. Frederick Reppun, MD
Editor

Physician Population, State of Hawaii*

	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
MEDICAL											
Primary Care											
General Practice	278	283	289	287	326	341	325	356	352	361	364
Surgery	113	111	113	113	113	114	114	120	123	126	127
Internal Medicine	172	190	190	222	246	265	293	313	332	359	382
OB-GYN	83	89	95	101	106	112	119	119	123	130	138
Pediatrics	107	108	106	111	125	127	129	136	141	144	153
Osteopathy	22	24	26	30	25	26	25	26	23	23	22
Total Primary Care Providers	775	805	819	864	941	985	1,005	1,070	1,094	1,143	1,186
Specialty Care											
Allergy	9	9	11	11	12	12	14	15	15	15	15
ENT	31	30	30	34	34	36	35	35	33	34	34
Anesthesiology	38	40	44	45	47	54	57	59	63	70	74
Dermatology	20	22	22	25	28	34	34	34	35	34	35
Neurology	19	22	22	22	25	27	29	28	27	28	33
Ophthalmology	42	43	44	46	49	50	58	52	55	58	60
Orthopedics	36	39	44	50	54	58	58	58	63	67	66
Pathology	24	25	25	22	23	24	23	22	20	25	29
Plastic Surgery	9	10	11	15	15	17	19	19	22	21	23
Psychiatry	80	93	97	100	109	119	122	130	139	147	146
Radiology	34	39	41	43	47	53	60	59	62	65	69
Urology	24	25	26	26	28	30	29	30	30	30	35
Total Specialty Care Providers	366	397	417	439	471	514	538	541	564	594	619
TOTAL	**1,141**	**1,202**	**1,236**	**1,303**	**1,412**	**1,499**	**1,543**	**1,611**	**1,658**	**1,737**	**1,805**

*Physicians who submitted one or more claims to HMSA in 1984.

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Hawaii Academy of Family Physicians' Newsletter

Membership News

We welcome several new members to our chapter this month, three of them on Kauai. Ruby De Alday recently left the military and is in solo practice in Kilauea. James Pagel, also in solo practice in Koloa, comes from Alabama; both are active members. Tom Halasey has moved to Kilauea from California and is retired; he is an inactive member. The latest new student member is Fern Takemoto, a junior at UH Medical School. We are glad to have them join HAFP!

Council News

HAFP President Bernard Chun recently visited the members on Kauai and reports on a very successful meeting. Fourteen members and non-member guests saw the videotape "Prescription for Malpractice Prevention" and also discussed matters of mutual concern such as hospital privileges, family practice departments at Kauai hospitals, fee schedules, and so on. Several members expressed an interest in initiating research projects. (AAFP has a very active committee in this area and will assist physicians whenever possible.) Dr. Chun's next visit will be to Maui sometime in November.

On June 20 the council met in a special session to review the 1983 Makaha planning meeting and to reactivate some of the activities begun there. Five major committees or working groups were established, namely (1) PR — Marketing Services; (2) Legislative (including members from Neighbor Islands); (3) Hospital; (4) Membership Services; and (5) Medical School. As the different groups formulate their activities, they will call upon the membership for assistance. Please be willing to contribute, we will all benefit!

HAFP has a resolution before the 1985 AAFP Congress of Delegates. It asks the academy to permit state chapters to establish a new membership category called "life-exempt." It deals with those life members who because of advanced age or disability no longer wish to participate on the national level and who under present rules are dropped from membership. We would like state chapters to have the option of continuing to carry these members on their membership rolls only and exempt them from any further dues payments. If you have strong feelings on this either way, please call the chapter office at 235-3115. You are also welcome to testify on this issue before the committee on bylaws during the session of the AAFP Congress of Delegates in Anaheim.

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Over the Editor's Desk

One and one-third million working people were potentially exposed to ionizing radiation at their workplaces in 1980. Almost half of them were employed in medicine. So reports the Environmental Protection Agency in its second report of exposure by occupational category. The first report, published in 1980, reviewed occupational exposure for the year 1975. The second report, "Occupational Exposure to Ionizing Radiation in the United States," provides a comprehensive review of exposure of workers for the year 1980, and a summary overview for the period 1960 through 1985. The EPA reports that among workers potentially exposed, 44% were employed in medicine, 23% in industry, 16% in government, and 11% in the nuclear fuel cycle. The mean annual dose in 1980 was 0.11 rem for all categories of working people, with 15% exceeding this dose; 1% of all workers received doses greater than five rems. The mean dose for all measurably exposed workers was 0.23 rem, with 20% exceeding the mean. Workers at nuclear power reactors received the highest mean dose of those measurably exposed — 0.65 rem.

Although the number of potentially exposed workers has grown, the mean annual dose to this group has decreased by a factor of almost two. Correlation of data yielded the estimate that the number of diagnostic and therapeutic radiology machines increased 56% from 1970 to 1980. During this period, the number of radioactive byproduct licensees in hospitals increased 87%, and the number of potentially exposed physicians and workers increased 80%. Measurably exposed workers in medicine received a mean dose equivalent of 150 mrem in 1980. Workers in hospitals received the highest dose, 200 mrem, with office-based workers receiving 180 mrem. Workers in dentistry, veterinary, chiropractic, and podiatry practices received doses of 70, 110, 80, and 30 mrem, respectively. "Occupational Exposure to Ionizing Radiation in the United States" is available from the Office of Radiation Programs: ANR-4580, United States Environmental Protection Agency, Washington, D.C., 20460. The publication number is EPA 520/1 84-005. There is no charge for the publication, but copies are limited.

* * *

The next "person" you see gliding down a hospital corridor with a food tray or lab specimen may not be a dietary aide or a lab technician, but rather a fully automated robot. Already widely used in a number of high-tech industries, robots are now being tested in some 30 U.S. hospitals to automate the pickup and delivery of medical supplies, lab specimens, meals and linens, and to perform other hospital functions. At Ohio's Cleveland Clinic, a recent study of robot efficiency in the laboratory found that the mechanical workers were superior to their human counterparts in terms of accuracy, precision, reliability, and documentation.

* * *

The Hawaii Cancer Information Service is seeking volunteers to help staff the free telephone line that provides callers with up-to-date information about cancer and cancer prevention. Volunteers will be helping the people of Hawaii learn what they can do every day in their lives to reduce the risk of getting cancer. Counseling or health-related backgrounds are helpful, but not required. Volunteers who qualify for acceptance will be asked to work one regular business day a week and will complete a training program before answering calls. For more information, call Robyn Kaufman at 548-8775, at the Cancer Research Center of Hawaii next to Queen's Hospital. The Cancer Information Service number is 524-1234. Neighbor Island residents are asked to call collect.

* * *

The American Academy of Pediatrics (AAP) has issued recommendations for using a new vaccine that protects against Hemophilus influenzae type B (Hib). A major cause of serious, invasive infections in infants and children (including meningitis), Hib infection incidence is highest in infancy. The exception is epiglottitis (a condition which produces a respiratory obstruction), when the mean age is 44 months. Called b-Capsa I., the vaccine has been recommended for all children 24 months old. It may also be given until the sixth birthday, and for those as young as 18 months in high-risk groups, such as those in day care centers, say the AAP and the Centers for Disease Control's Advisory Committee on Immunization Practices.

* * *

The January 1985 issue of Infectious Diseases, Vol. 15, No. 1, has an article by Itzhak Brooke, MD, of the Uniformed Services University, Bethesda, which points out that the beta-lactamase producing trains of H influenzae, S aureus and bacteroides sp (2) often present in pharyngitis/tonsillitis in children explains why penicillin increasingly fails to eradicate group A hemolytic streptococci (GABHS). "These Beta-lactamase-producing organisms (BLPO) may protect the GABHS from penicillin by inactivation of the antibiotic." The recommended treatment for persisting recurring pencillin-resistant pharyngitis/-tonsillitis may be the agent/combination of anoxicillin and K Clavulanate (Augmentin^{R}, *Beecham)* approved by the FDA.

* * *

Therma-Gel Therapy products are now available from JMS Berkshire Resources, Inc. The firm distributes a wide variety of therapy products used for orthopedic, podiatry and sports applications. The new Therma-Gel products provide "hot" or "cold" therapy for sore muscles and joints. Variations of the product can be used for treatment of the elbows, knees, ankles, shoulders, and even the lumbar region. The Therma-Gel products are made of a tough, flexible gel, covered with a four-way stretch material that allows maximum conformity, heat transfer and comfort. A single product serves for both hot or cold treatments. The product can be heated in a microwave or conventional oven and cooled in a freezer. It provides excellent heat therapy to sore muscles and joints for 20 to 30 minutes before reheating. For cold therapy, Therma-Gel will usually numb an area in three to five minutes without producing a "cold shock" as ice packs often do. Contact: JMS Berkshire Resources, Inc., 222 Getty Ave., Clifton, N.J. 07011; (201) 340-2602.

* * *

Hawaii Medical Service Association, Island Care, and Kaiser all have submitted "Health Plans" to Small Business Hawaii on a group basis. Sam Slom is the president of Small Business Hawaii. Enrollment will be open each May and the effective date of coverage each July 1, but initial enrollment is available now. There are variations, however, among the three. HMSA does not quote premium rates, but seems to imply similarity to those of its other current programs. It does say: "Coverage through Small Business Hawaii is among the most comprehensive programs available to employers and their employees." HMSA, of course, has a large panel of "participating physicians" available to SBH subscribers throughout the Islands.

Island Care offers: "Physician services . . . are provided at the Honolulu Medical Group and several doctors in Aiea, Waimalu, Pearl City and Waipahu." Honolulu Medical Group satellite branches will be in place this year "in the Windward, Leeward and Kahala/-Hawaii Kai areas." It is already serving Oahu, Kauai and Hilo; Maui will be served soon. Coverage will be comprehensive — in full, with no deduc-

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tibles, etc. The quoted monthly premiums are $80.10 for a single person, $157.36 for a couple and $245.70 for a family.

Kaiser expects to open its new medical center in Moanalua on Sept. 30, with 202 beds and 72 physician's offices. The Permanente group has satellites at Maili, Mililani, Kahuku, Kaneohe and Waipahu on Oahu, with a facility coming up near Thomas Square. It has two on Maui, at Lahaina and Wailuku. It offers two options, with some deductibles, and quotes a monthly premium of $192.74 for a family of two or more dependents for its most comprehensive option.

* * *

Surviving a Hospital Stay — It has been stated, "Be an active patient. Passivity Kills." This statement can literally be true, as one report by a consumer health group noted that some 20 percent of patients entering hospitals develop problems caused by the hospital itself. These problems include excessive testing, medication errors, and infection. Some problems such as substituted surgeons or unauthorized procedures can be avoided on admission by the patients themselves editing consent forms. Medications present a big potential hazard. Patients are advised to know the name and dosage of their medications and not to take any drug while in the hospital without knowing what it is. They should also inform hospital personnel of any drug allergies, and of medications they are currently taking.

One report notes that 5-10 percent of all hospital patients, or about two million people, get infections each year, of which about 3 percent are fatal. Excessive testing is another problem, with blood sometimes being drawn more for the convenience of different labs than for the well-being of the patient. Some hospitals permit the patient to keep medications at bedside and take them himself, rather than have them given by hospital personnel. This is a good way to prepare the patient for caring for himself after leaving the hospital. (Surviving a stay in the hospital from consent forms to discharge. The Wall Street Journal, Section 2, May 2, 1985).

* * *

New Cylinder Post Valve Design Solves Nagging Problems — Western Enterprises has announced important design modifications that improve the patient operation and safety of post-type cylinder valves. (See photo at right.)

The design change is highly beneficial to portable oxygen therapy patients who also suffer from diminished hand strength and dexterity. The new valve design allows patients to set or change the oxygen flow rate by using a stem wrench or by turning a stem-mounted handle the fingers, whichever is easier.

This wrench/hand "dual control" feature promotes independence and confidence among portable oxygen patients who previously might have felt unable to control their own oxygen. For many patients, the finger-operated handle removes the aggravation and inconvenience of a misplaced or lost wrench.

* * *

Hospital Medical Staff Section Delineation of Privileges: Non-Physician Practitioners — The 1985 standards initiated a new flexibility in this regard; JCAH standards now functionally define eligibility for clinical privileges. The standards state that "individuals who are permitted by law and by the hospital to provide patient care services independently in the hospital have delineated clinical privileges whether or not they are members of the medical staff."

The JCAH standards mandate that all practitioners be assigned to particular clinical departments and serve under the authority of the department chairman. In turn, the department chairman, with the aid of peer recommendations, has the responsibility of monitoring, evaluating and recommending clinical privileges for both physicians and non-physician practitioners in his department.

This policy is explicit in acknowledging the right of non-physician practitioners to have access to hospital facilities while at the same time recognizing the importance of assuring appropriate standards of care.

The JCAH standards also require the medical staff to delineate privileges for non-physician practitioners on an individual, rather than categorical, basis. This requirement further highlights the important of accountability in the privileging process. If non-physicians are members of the medical staff, they may be granted admitting privileges. Admitting privileges are not granted automatically, however. They must be specifically awarded by the governing board based on the recommendations made by the medical staff executive committee. (AMA, June 1985 HMSS Volume 2, No. 6).

* * *

"Hospitels," A Convenient Option — Seeking new ways to fill unoccupied beds and cut costs for both patients and the hospital, a growing number of hospitals are converting some of their patient rooms into typical hotel rooms. Called "hospitels" or "hotel/hospitals," these rooms are usually located within or adjacent to the actual hospital and are designed for use by the patient's family or for recovering patients who no longer need round-the-clock medical care.

* * *

In New York, a revised version of Gov. Cuomo's 1985 Program Bill on medical liability has been enacted. Major provisions of the new law include:

1—Mandatory hospital programs for identification and prevention of medical injuries.

2—Mandatory pre-calendar conferences for medical liability actions.

3—Reduction of awards by collateral source benefits available to compensate for future economic losses.

4—Payment in periodic installments of future damages in excess of $250,000.

5—Imposition of costs, including attorney fees, upon parties asserting frivolous claims or counterclaims.

6—Revision of the sliding scale for attorney fees. (A. 7376) (American Medical Association Legislative Roundup, July 1985)



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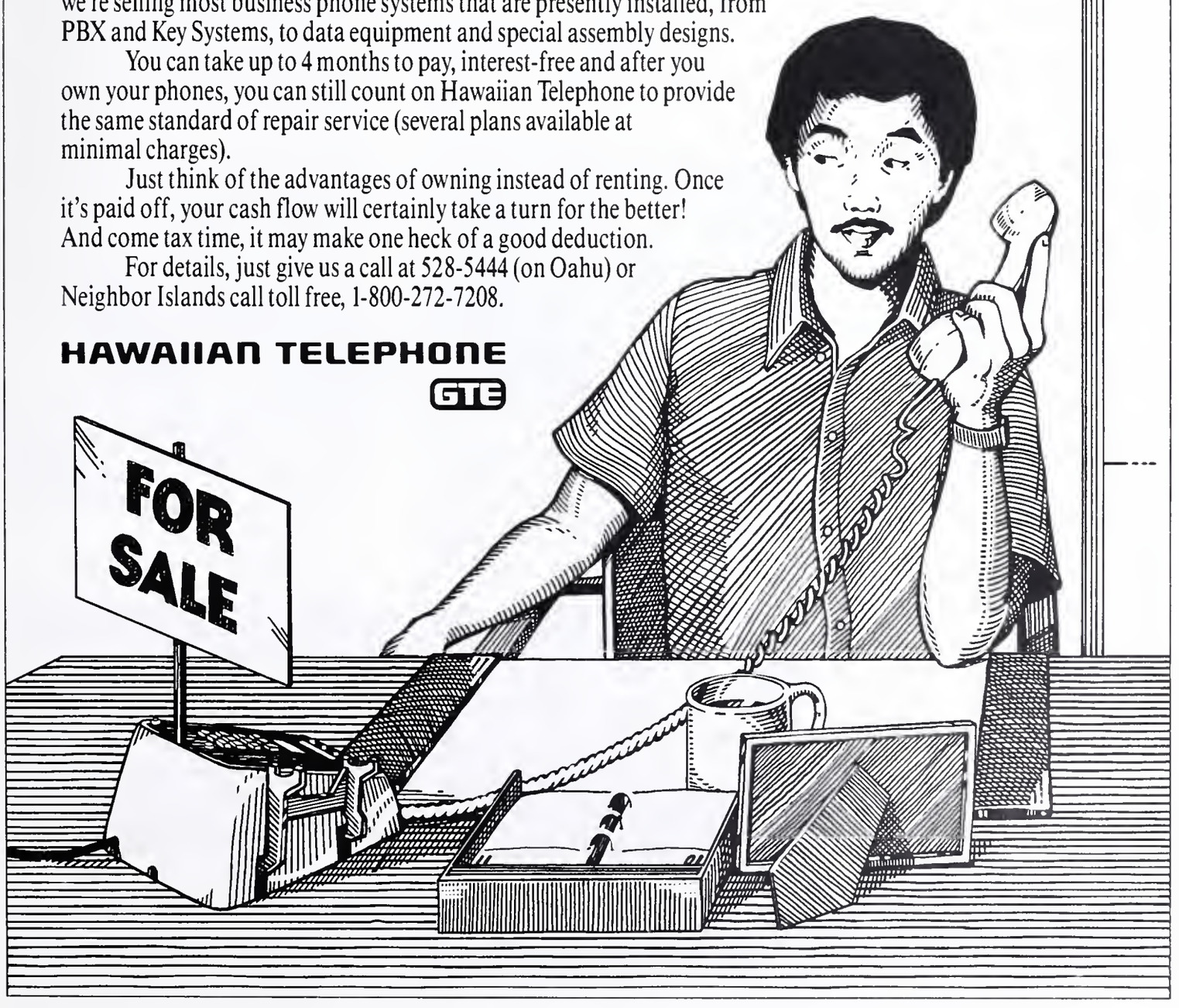
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Replantation* in the Upper Extremity: A Six-Year Experience in Hawaii

James R. Doyle, MD**

Development of the operating room microscope, fine suture material and needles, and appropriate technique has made it possible to reattach amputated digits, hands and arms.[1]

Terminology

A *complete traumatic amputation* refers to total or complete separation of one of the parts of the body that requires complete *replantation.* An *incomplete* (partial) *amputation* indicates partial separation of a part of the body and lack of circulation to that part. The part may still be attached by tendon, nerve, bone or small skin bridge. A *subtotal replantation* is required.

Both of these types require artery and vein repair. An *ischemic injury* is characterized by arterial damage that renders the limb avascular but with an intact venous system. Arterial repair or reconstruction is required and is called *revascularization.*[3]

Indications and Patient Selection

In general, replantation is indicated if the potential benefit is not outweighed by the risks involved. Although skillful replantation may result in a viable part, this success is not always associated with useful function.

However, certain types of traumatic amputation are more likely to result in the functional success of replantation as compared to loss of the part or a prosthetic device.

Such replantations are of (1) the thumb, (2) multiple digits, (3) partial hand (mid-palm) or wrist level, (4) distal forearm, and (5) virtually any of a child's body parts.

Contraindications

Amputations at multiple levels, severely crushed parts, other serious or life-threatening injuries, and single-finger amputations in the adult, proximal to the insertion of the superficialis tendon, may represent valid contraindications to replantation. It must be noted, however, that these indications and contraindications are not absolute.

Preoperative Management of the Patient and Amputated Part

In major amputations, or in the polytrauma patient who has sustained an amputation, all life-threatening conditions must be stabilized before attempting replantation. Tetanus prophylaxis and prophylactic antibiotics are indicated. The amputated part should be cooled as soon as possible. Completely amputated parts should be placed in a surgical sponge or small towel moistened with Ringer's lactate or saline solution and inserted into a plastic bag and then placed on ice. Incomplete amputations should be placed in a support dressing with an icebag beneath. Most amputations of the upper extremity occur at the digit or hand level where no significant muscle mass is present. Amputations at or proximal to the wrist, however, involve significant muscle mass and the duration of avascularity is more critical. With proper cooling a digit may be successfully replanted up to 24 hours after amputation but an arm replantation is unlikely to be successful after 10 to 12 hours of avascularity of the part, even with proper cooling.[3]

Technical Aspects

Replantation or revascularization of digits requires anastomosis of arteries and veins that measure 1 mm or less in diameter. Vessels in the palm or mid-metacarpal level measure 1 to 1.5 mm and vessels at the wrist may measure 2 to 3 mm in diameter.

Successful anastomosis of these blood vessels requires: (1) a specially designed operating room microscope with a double head for surgeon and assistant, (2) special microsurgery instruments with fine tips that close accurately, including forceps, needle-holders, scissors and vascular clamps (See Figure 1), and (3) monofilament nylon suture of 10-0 or 11-0 size, attached to a non-cutting needle that measures 50-70 microns in diameter (9-0 or larger suture may be used for larger vessels; See Figure 2).

Replantation is performed under ideal circumstances when two teams are used. Each team, using loupe magnification, identifies and tags with sutures the nerves, arteries, and veins. The amputated part is kept on ice in sterile plastic bags while these preliminary steps are taken. Bone-shortening (0.5 to 1 cm) is performed as needed in order to provide arterial repair without tension; the amputated part is then reattached by means of trans-osseous Kirschner wires or loops of wire.

The usual sequence of repair is of (1) extensor tendon, (2) flexor tendon, (3) arteries (one or two), (4) veins, (5) nerves, and (6) skin. Bone-shortening is chosen as an alternative to vein-grafting. However, vein-grafting is performed if a tension-free primary arterial repair cannot be made.

Veins of appropriate size are removed from the flexor aspect of the wrist or dorsum of the foot. The damaged ends of the arteries are trimmed until normal intima is identified under high-power magnification of the operating room microscope.

These principles apply to the veins, as well. An alternative to vein-grafting is the transposition of an adjacent, uninjured digital artery to the distal arterial stump. At least one artery and two veins are repaired in fingers.

The use and role of anticoagulants in the operative and postoperative period are controversial. Most replantation surgeons have abandoned the routine use of heparin; Dextran-40 (10%) at the rate of

* "Replantation" is a coined word, perhaps 10 to 15 years old, now in common medical (surgical) usage/*ed.*

** Assistant Professor, Department of Surgery, Division of Orthopedics, John A. Burns School of Medicine, University of Hawaii. Founder and director of Microsurgical Laboratory, Queen's Medical Center, Honolulu.

Accepted for publication May 1985.

TABLE 1.

Procedure	Level of Amputation			
	Forearm	Hand	Thumb	Finger
Replantation	0	0	6	14
Subtotal Replantation	0	1	2	4
Revascularization	1	2	0	0
SURVIVAL RATIO	1:1	3:3	6:8	14:18

OVERALL SURVIVAL RATE 24:30 = 80%

An overall survival rate of 80% was achieved in this series of 30 amputations.

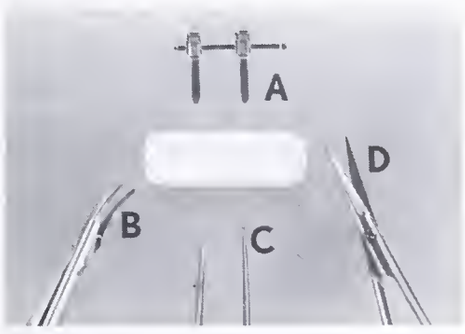


FIGURE 1.
Commonly used microsurgical instruments for replantation. (A) The blood vessel approximator clamp for digital vessels 1.0 mm in size or less. (B) Needle holder. (C) Fine-tipped forceps for grasping the blood vessel wall and suture. (D) Scissors used to trim blood vessels and to cut sutures.



FIGURE 2.
10-0 size nylon suture attached to a 70-micron diameter curved needle 4 mm in length.



FIGURE 3A.
Pre-operative appearance of a complete amputation of the right thumb sustained while roping a steer.



FIGURE 3B.
One year after replantation, demonstrating good function. The patient returned to his usual occupation as a heavy equipment operator and two years after replantation won a team roping championship.



FIGURE 4A.
Pre-operative appearance of a complete four-finger amputation sustained in a paper cutting machine.



FIGURE 4B.
Appearance one year later showing functional pinch between the thumb and little finger. The patient returned to his original occupation in the printing industry.

20 to 30 ml per hour and 600 mg aspirin twice daily are used by many surgeons in the intraoperative and postoperative period. Dextran is believed to prevent intracapillary sludging and red cell aggregation; aspirin is used to prevent platelet aggregation.[3]

Postoperative Care

Perfusion of the amputated part may be evaluated by color, warmth and tissue turgor. A more reliable method is monitoring skin temperature using a thermistor probe applied to the distal pulp of the amputated part and attached to a digital readout Telethermometer. If the temperature drops below 30 degrees centigrade, vascular compromise is present and the vascular repair sites must be explored immediately.

In the recovery period, the patient is not allowed to smoke, since nicotine is a vasoconstrictor. Vasospasm may be treated by medication such as chlorpromazine (Thorazine), or by sympathetic nerve block either at the stellate ganglion or at peripheral nerve sites proximal to the amputation.

Results

The success rate in this series is given in Table 1. Figures 3 and 4 illustrate two typical cases of replantation. An 80% to 90% success rate may be achieved in replantation by experienced surgeons.[2] Most functional results are better than function when the part is lost or when a prosthetic device replaces it.

The recovery of sensation in the amputated part, although not complete, leads to a considerable advantage over a prosthetic device and is comparable to the results obtained in isolated nerve laceration repair.

Similarly, range of motion, although not normal, may well approach 50% of normal, which is superior to that of a prosthetic device. The cosmetic appearance after replantation is almost always better than when the part is lost or when a prosthetic device is in place.

Conclusions

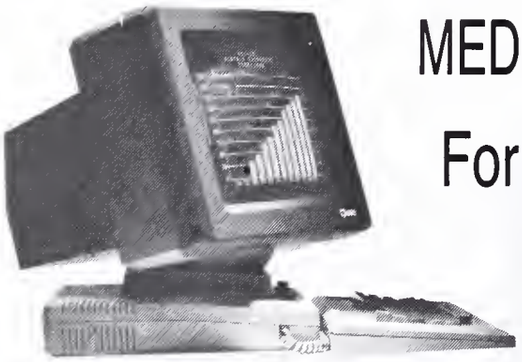
Replantation of an amputated part of the upper extremity may be successful in a high percentage of cases. The functional as well as cosmetic results are far superior to a prosthetic device and this treatment alternative should be considered in selected patients.

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"Hey you guys! Scram! Go asside by da door; ony look an' lissen an' no come eensai. No make noise, you heah? Dis allsame school, an' you guys mo' bettah learn about dis. You like I geevum one big needul?" The pupils of their eyes enlarged in fear and trepidation.

"Mrs. K., maybe you t'ink dis allsame nutting, but look out! Suppose da peepee allsame strong tea, da face all swellum up, da opu allsame watamellon; suppose da keed no like eat an' he trow out — dat mean he got kidney trouble! Plenty pilikia, dis one. Maybe goin' māke! Gotta put 'im eensai da hospital. An' all from da kine flea bites, mosquito bites an' dirt an' scratch wit' da fingernails. Da kidney he bin' damage from da poison from da germs go eensai da sores.

"OK. 'Nuff da lecture. Dees keeds no mo' da kine; I only warn you. Main ting you learn how take care da kakios."

"Doc," she managed to speak through her penitent sobs, "but dees keeds take shower evy day!"

"Yeah, I know, Mrs. K. I betcha dey take dere own by deyselves."

"OK, Doc. What I goin' do?"

"You put 'em eensai da bathtub wit' soapy watah an' scrub 'em good, leetul bit rough OK. Hemo da papa'a. Leetul bit bleed, no harm. Bimeby mak'um dry. Den put dis ointment on top. Now you lissen good all you guys! Dis kine contagious; you savvy c-o-n-t-a-g-i-o-u-s? Suppose you touch 'em or use da same towel, you goin' gettum too.

"Mrs. K. Da kine keed shower allsame nutting; you gotta supervise."

"Auwe, Doc!"

Mrs. K. was relieved and grateful that her kiddies didn't have nephritis this time; she was impressed and might remember the warning for a few days, perhaps, but her brood was not. She promised the kahuna to return in a few days and show the results of care.

"Doc, how come you nevah geev Joe the needul?" piped up Kimo from a safe distance, voicing his siblings' disappointment in being deprived of a fear-and-fascination drama.

Glossary
kakio = ecthyma, impetigo
keiki = child
luau feet = broad and flat, adapted to sand and to taro patches
opu = belly
pilikia = trouble
hemo = remove
papa'a = scab

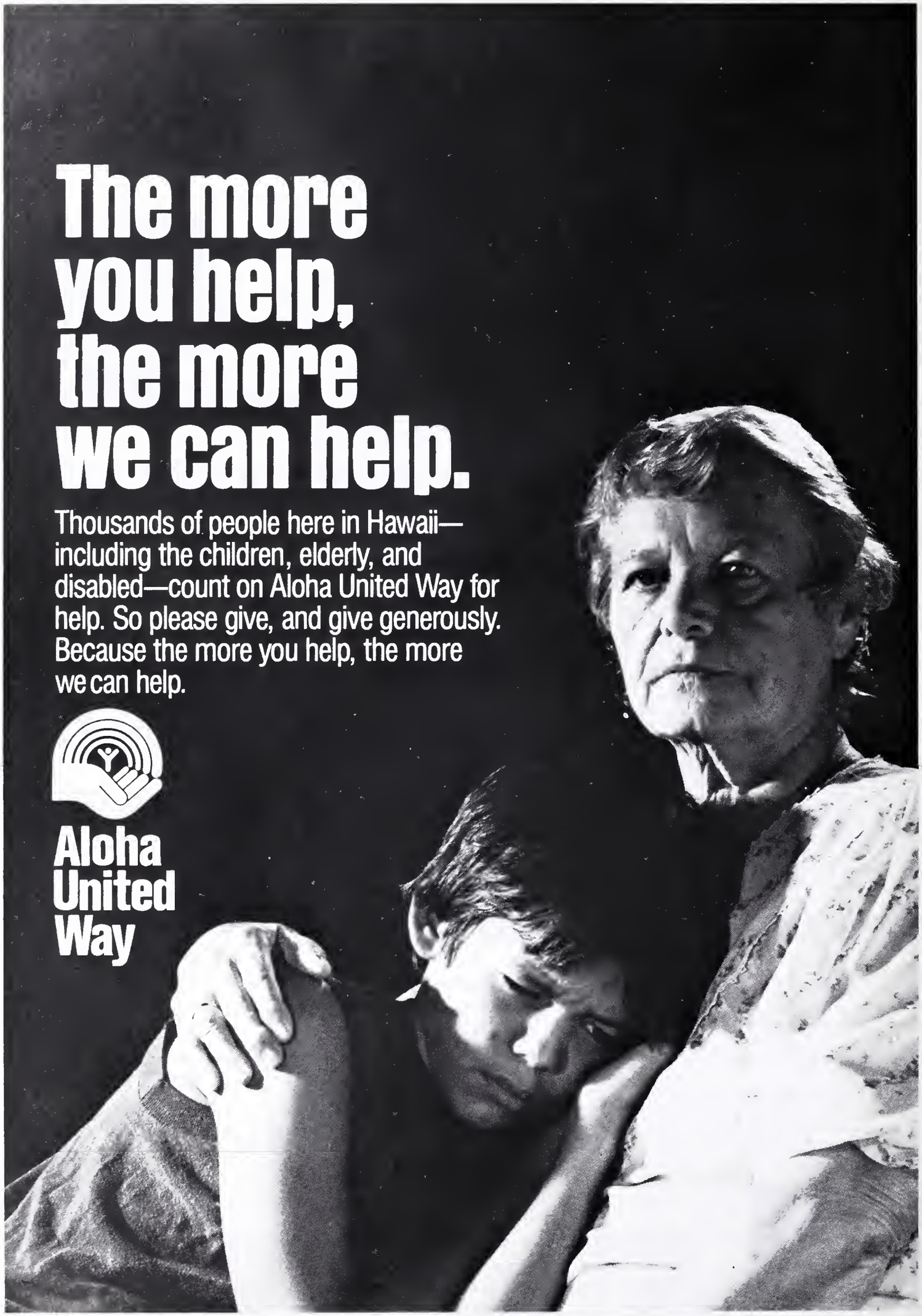
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Male Predominance in Persistent Staphylococcal Colonization and Infection of the Newborn

R.W. Enzenauer, MD, MPH, MAJ, MC*; C.R. Dotson, CPT(P), MSC**;
T. Leonard, MD, LTC, MC*; L. Reuben, MD, MAJ, MC*;
J.W. Bass, MD, COL, MC*; J. Brown III, MD, COL, MC*

The hospital environment has been shown to play a particularly important role in the incidence of neonatal staphylococcal colonization.[1] *The infant who becomes colonized with staphylococci within the immediate newborn period is more likely to develop neonatal staphylococcal infection than the uncolonized newborn.*[2-6] *Consequently, staphylococcal colonization surveillance has become a technique used increasingly to detect and control staphylococcal colonization in the newborn.*[4]

Brown suggested that infants having quantitatively higher colony counts on direct agar-skin contact plates might be at higher risk of developing staphylococcal skin disease.[7]

A prospective birth-cohort study was designed to determine the value of semiquantitative colonization of *S. aureus* as a predictor of eventual staphylococcal pyoderma. This study also was designed to evaluate gender-related differences in staphylococcal colonization and subsequent staphylococcal disease in the newborn.

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The opinions or assertions contained herein are the private views of the author(s) and are not to be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.

Accepted for publication April 1985.

Materials and Methods

A birth-cohort of newborn infants born at Tripler Army Medical Center after Oct. 22, 1979, and discharged before April 2, 1980, were included in the study. Only those babies who were admitted to the "well-baby" nursery and routinely discharged from "rooming-in" were included.

Excluded were all infants who were born outside the hospital and later admitted to the "well-baby" nursery and any infants who were first admitted to the "sick-baby" nursery for observation but later transferred to the "well-baby" nursery. Infants who were first admitted to the "well-baby" nursery and later transferred to the "sick-baby" nursery also were excluded.

Cultures were made of 1,343 infants: 591 circumcized males (males-C), 99 uncircumcized males (males-UC), and 653 females by direct agar-skin contact plate (Rodac) technique twice before the infants were discharged from the hospital. Informed consent was obtained from the parents for this study before the infants were admitted to the newborn nursery.

The mean age of infants at the time of culture was one day and 2½ days, corresponding to release from the nursery to rooming-in, and discharge to home, respectively.

A culture was taken at 72 hours on all infants not ready for discharge. At the time of the second culture, parents were assigned a return appointment at 10 to 14 days of age (mean time for follow-up culture, 12.5 days).

The infants who completed the entire protocol numbered 1,134: 486 males-C, 73 males-UC, and 575 females.

Cultures

Direct application of agar plates to skin is an effective method of detecting skin colonization.[8-11]

Direct-contact plates: The first and second nursery cultures were obtained by the direct agar-skin contact method using Rodac plates containing mannitol salt agar. This selective medium has been shown to enhance the recovery of *S. aureus* by inhibiting gram-negative organisms.[12]

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The agar surface of the plate was applied directly to the skin surface just to the right of the umbilicus. The agar surface was pressed down with even pressure and slight rocking motion to ensure even distribution of agar-skin contact. Care was taken not to twist or slip the agar to prevent smudging the culture inocula or the agar surface.

Follow-up swabs: Cultures were obtained from infants returning to the follow-up clinic using dry cotton swabs to sample the skin just to the right of the umbilicus. Swab cultures were plated on blood agar and mannitol salt agar. Any disease lesions detected during this period were cultured by the same swab method. Swabs were used, rather than Rodac plates, since qualitative and not quantitative cultures were desired.

Staphylococcal Isolates

Organisms were identified on plates by colony morphology and confirmed microscopically. Direct-contact plates were counted after 24 hours and 48 hours. Colony counts were recorded as exact numbers up to 99 colonies.

Plentiful overgrowth of staphylococcal isolates, precluding exact colony counts, were recorded as "greater than" 99 colonies.

All staphylococcal isolates were tested for catalase, coagulase, and DNAase. All coagulase-positive staphylococci, whether isolated from surveillance skin cultures or disease lesions, were phage-typed by the Department of Health, State of Hawaii.

During the study, the names of the patients were not known to the laboratory. All laboratory evaluations were done by culture numbers and reported to the physician by number.

The follow-up examinations were performed by physicians in the well-baby clinic or by the staff pediatricians when infants had skin infections before their scheduled appointments. The physicians performing these examinations were unaware of previous culture findings.

Statistical significance was determined using the chi-squared distribution with one degree of freedom.

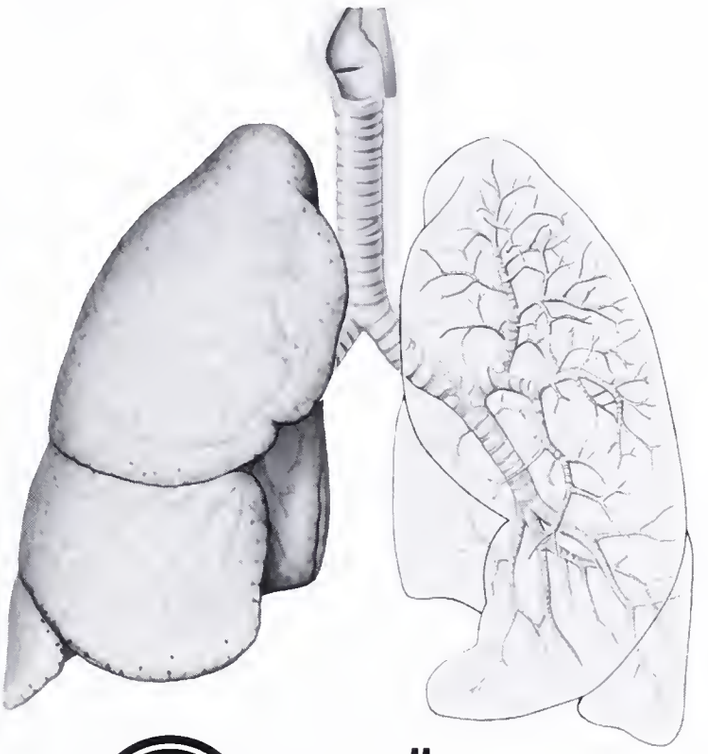
Results

There was no association between quantitative colony counts of positive nursery cultures and subsequent staphylococcal skin disease.

Results of the first culture established an overall 10.2% colonization rate (10.3% females, 10.1% males-C, and 11.0% males-UC; See Table 1.) Overall colonization rate after the second culture was 17.5% (15.6% females, 20.6% males-C, and 12.3% males-UC). The nursery colonization rate determined by an infant having at least one positive nursery culture was 22.8% (20.9% females, 25:3% males-C, and 20.5% males-UC).

Staphylococcal colonization at follow-

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Brief Summary Consult the package literature for prescribing information

Indications and Usage Ceclor® (cefaclor, Lilly) is indicated in the treatment of the following infections when caused by susceptible strains of the designated microorganisms

Lower respiratory infections, including pneumonia caused by *Streptococcus pneumoniae (Diplococcus pneumoniae)*, *Haemophilus influenzae*, and *S. pyogenes* (group A beta-hemolytic streptococci)

Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIOTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABORATORY EVIDENCE OF PARTIAL CROSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALOSPORINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS INCLUDING ANAPHYLAXIS, TO BOTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins); therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics. Such colitis may range in severity from mild to life-threatening.

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia. Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis.

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone. In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation. When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile*. Other causes of colitis should be ruled out.

Precautions *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued, and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids.

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug.

Ceclor should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip USP, Lilly).

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers — Small amounts of Ceclor® (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses. Average levels were 0.18, 0.20, 0.21, and 0.16 mcg/ml at two, three, four, and five hours respectively. Trace amounts were detected at one hour. The effect on nursing infants is not known. Caution should be exercised when Ceclor is administered to a nursing woman.

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established.

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below.

Gastrointestinal symptoms occur in about 2.5 percent of patients and include diarrhea (1 in 70).

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment. Nausea and vomiting have been reported rarely.

Hypersensitivity reactions have been reported in about 1.5 percent of patients and include morbilliform eruptions (1 in 100). Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients. Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported. These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor. Such reactions have been reported more frequently in children than in adults. Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients).

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported. Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician.

Hepatic — Slight elevations in SGOT, SGPT, or alkaline phosphatase values (1 in 40).

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40).

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200).

[061782R]

Note Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients.

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. See prescribing information.

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TABLE 1.

Newborn Staphylococcal Colonization and Skin Disease as a Function of Sex of Infant

	Totals N	Positive First Nursery Culture	Positive Second Nursery Culture	Positive First or Nursery Culture	Positive Follow-up Culture w/o Disease	Skin Disease At Follow-up
Circ. Males	486	49 (10.1%)	100 (20.6%)	123 (25.3%)	65 (13.4%)	31 (6.4%)
Uncirc. Males	73	8 (11.0%)	9 (12.3%)	15 (20.5%)	5 (6.8%)	2 (2.7%)
Females	575 (100%)	59 (10.3%)	90 (15.7%)	120 (20.9%)	14 (2.4%)	13 (2.3%)
Totals:	1,134 (100%)	116 (10.2%)	199 (17.5%)	258 (22.8%)	84 (7.4%)	46 (4.1%)

up, without overt disease, was 7.4% overall (2.4% females, 13.4% males-C, and 6.8% males-UC). Interestingly, staphylococcal colonization in the nursery did not correlate with colonization at the follow-up examination when infants with overt disease are excluded. (See Table 2.)

Staphylococcal skin disease was detected in 46 (4.1%) infants during follow-up examination, including 13 females (2.3%) and 33 (5.9%) males: 31 (6.4%) males-C and 2 (2.7%) males-UC. (See Table 1.)

Skin disease occurred in 7.8% (N = 116) of first culture-positive infants (CPI), compared to 3.6% (N = 1,018) of first culture-negative infants (CNI) ($0.05 < p < 0.1$). Disease was noted in 10.1% of second CPI versus 2.8% (N = 935) of second CNI ($p < 0.005$).

Skin disease was documented in 8.5% (N = 258) of first *or* second CPI (defined as the nursery colonization rate) vs. 2.7% (N = 876) of the first *and* second CNI ($p < 0.005$) (Table 3).

Results by Gender

Of the 1,134 (84%) infants who completed the protocol, having a follow-up exam at two weeks of age, 575 were female and 559 were male (486 male-C and 73 male-UC).

Staphylococcal colonization rates during hospitalization (first nursery culture, second nursery culture, and first *or* second nursery culture positive) were not statistically different among females, males-C, or males-UC ($p < 0.10$).

Males exceeded females for staphylococcal colonization without disease at the follow-up examination ($p < 0.005$), and also for skin disease ($p < 0.005$).

Staphylococcal colonization at follow-up and skin disease rates among uncircumcized males were more similar to the rates of the females than to their circumcized counterparts.

Circumcized males had rates of follow-up colonization and skin disease that were twice those of uncircumcized males. However, these differences were not statistically significant ($p < 0.10$), perhaps due to the relatively small number of males-UC compared to males-C in the study population.

Phage-Type Results

The staphylococci isolated during the study represented 58 different phage types, some nontypable. The most common phage types, in order, were (95), (nontypable), (96), (94/96), and (29). These phage types accounted for 71.4% of nursery isolates and 70.6% of follow-up isolates. Phage type (95) represented 40% of all nursery and 39.4% of all follow-up isolates. Twenty percent of infants with positive follow-up cultures were previously colonized with the identical phage type in the nursery.

Discussion

Most newborn infants are sterile at birth, unless the delivery is complicated by prolonged rupture of membranes. Colonization of newborn infants by potential pathogens logically must precede the development of invasive disease.

Most infants become staphylococcal carriers during the first days of life while in the newborn nursery.[2]

Generally, the umbilicus and groin are colonized first, and the nose and neck much less rapidly.[2, 13] The primary reservoir of staphylococci apparently is the infants themselves.[14] The umbilicus is thought to be the most important reservoir.[15]

The earlier and more widely that an infant becomes colonized with staphylococci, the more likely he is to develop infection with staphylococci later.

Infants with positive cultures at discharge have had higher rates of disease than those with negative cultures at discharge.[2-5] Our results unequivocally confirm these earlier observations.

TABLE 2.

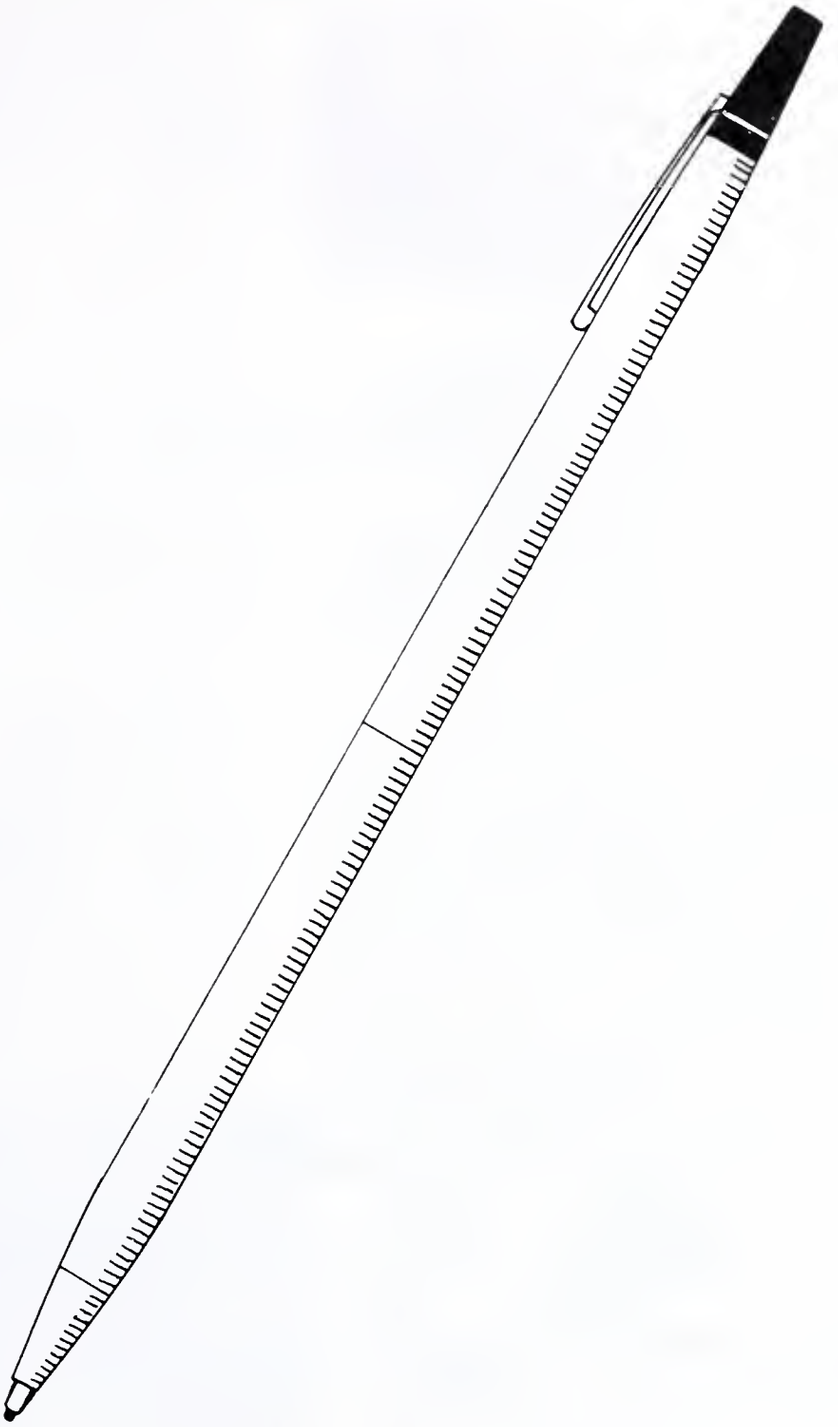
Staphylococcal Colonization at Follow-Up, Without Overt Diseases, as a Function of Nursery Colonization

	Follow-Up Cultures +	Follow-Up Cultures -
Nursery Positive 1st or 2nd cult	31	205
Nursery Negative 1st and 2nd cult	53	799

TABLE 3.

Newborn Staphylococcal Skin Disease as a Function of Nursery Colonization

	First Culture		Second Culture		First or Second Culture	
	+ CPI	- CNI	+ CPI	- CNI	+	-
Disease N = 46	9	37	20	26	22	24
N = 1,088 no Disease	107	981	179	909	236	852
Totals N = 1,134	116	1,018	199	935	258	876



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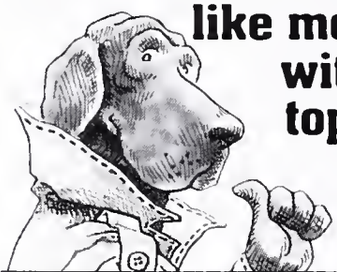


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It is tempting to suggest that babies differ in their susceptibility to staphylococci.[16] Many investigators have noted that males are particularly prone to both staphylococcal colonization and later development of staphylococcal infection,[3, 4, 6, 17] particularly in the diaper area.[17]

Curran and Al-Salihi described a massive outbreak of Staphylococcal Scalded-Skin Syndrome (SSSS), and remarked that the preponderance of males with generalized exfoliative skin disease suggests that the circumcision wound may provide a site of colonization for staphylococci resulting in an increased incidence of SSSS in males. They did not document male preponderance for bullous impetigo;[18] however, their investigation was retrospective.

Our study prospectively confirms the male predilection for neonatal staphylococcal skin disease. During hospitalization, males and females have similar colonization rates, but males have greater colonization and eventual staphylococcal skin disease thereafter.

This study did not confirm any superiority of quantitative culture over simple qualitative swab methods for predicting eventual staphylococcal skin disease. However, the more selective media resulted in identifying almost twice as many infants colonized with *S. aureus* as did a similar smaller study done previously at our institution.[6]

The increased incidence of staphylococcal colonization and pyoderma in males may be associated with circumcision performed after the first 24 hours of life in the nursery.

Circumcision is performed on approximately 90% of the male infants born at our hospital.[6] In our study population, 87% of the males were circumcized.

Circumcision, by its very nature, requires more staff-patient "hands-on" contact. The infants are all lined up and their stomachs lavaged clear in preparation for the procedure. The circumcisions are done daily, as a group, in a small area, using reusable circumcision restraints.

Postoperatively, there is also more handling of the diaper area in caring for the fresh, hemorrhagic wound.

A larger study, involving more infants, is required to validate the hypothesis that circumcision is the culprit responsible for the increased rate of staphylococcal colonization and infection in newborn males. This may be due to the remarkably high rate of neonatal circumcision done in the United States. A much smaller study would be satisfactory if it were performed in Great Britain or one of the developed countries of Europe, where the incidence of noncircumcision is more equal to the rate of circumcision in the U.S.

Gellis eloquently indicted circumcision, noting that the infant "has enough portals of entry for organisms as it is," referring to the infant's nose, mouth,

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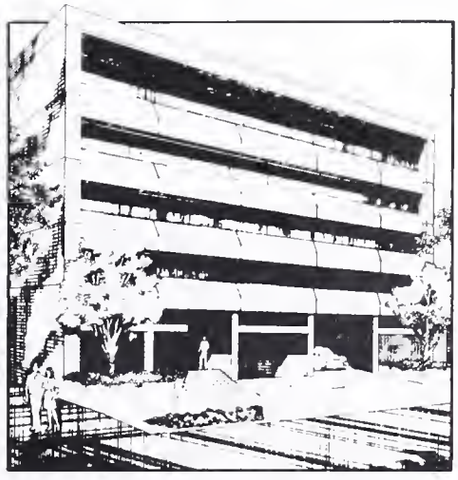
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Liver Biopsies of Blood Donors With Elevated Alanine Aminotransferase (ALT)

Thomas Reppun, MD,* and Amod Jain, MD*

The percutaneous liver biopsies of eight asymptomatic blood donors with persistently elevated alanine aminotransferase (ALT) levels without evidence of type B hepatitis all revealed steatosis without evidence of hepatitis. These findings and those of Jorke[3] suggest that a liver biopsy cannot be used to re-establish a blood donor's suitability in the presence of persistently elevated ALT. In addition, these findings suggest the need for long-term epidemiologic studies of chronic elevated alanine aminotransferase.

Introduction

In an attempt to reduce the incidence of post-transfusion hepatitis, routine ALT testing of all blood donors was instituted at the Blood Bank of Hawaii in December 1981. This practice was based upon studies correlating cases of post-transfusion hepatitis with blood donors who had elevated ALT levels.[1, 2] When a potential donor is found to have an elevated ALT, the donor is urged to seek medical consultation in order to diagnose the presence or absence of hepatic disease and to determine whether he or she is acceptable as a blood donor. This paper will give an overview of the medical histories of the eight donors and will describe their liver pathology.

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Honolulu, Hawaii 96815

Accepted for publication July 1985.

Methods

The six patients in this study include

Table 1.
Patient Data

PATIENT #	1	2	3	4	5	6	7	8
AGE (YEARS)	18	42	28	36	48	49	54	59
SEX	M	M	M	M	F	F	M	F
WEIGHT (LBS.)	217	217	209	176	155	177	190	143
SYMPTOMS	None	None	None	None	Feels sluggish	Feeling run down	None	None
ALCOHOL	Occa-sional*	Stopped 6 mos. ago	None	Mod-erate**	Mod-erate**	None	Occa-sional*	None
OTHER MEDICAL PROBLEMS	Obese; asthma	Obesity	None	None	Post-chole-cystectomy & appendec.	Obesity; TB— exposure	None	None
SGPT (Highest/Lowest)	178/56	120/50	185/120	146/80	105/80	310/94	130/73	295/78
Internal prior to biopsy (months)	10	12	17	12	12	5	10	4
STEATOSIS	3+	1+	1+	3+	1+	2+	1+	2+
FIBROSIS	1+	—	—	±	±			±

* = social events only ** = several times per week

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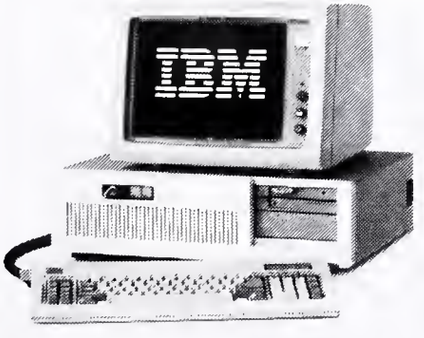
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all those in whom an initial finding of elevated ALT by routine testing at the Blood Bank of Hawaii and were then followed by KPMC Department of gastroenterology to determine the persistence of ALT elevation, and ultimately had a liver biopsy done. (See Table 1.) The time period of this study was December 1981 to March 1984. Each donor's medical history, including alcohol consumption and drug use, was reviewed. The following laboratory tests were performed on all of the donors: CBC, PT, PTT, Hepatitis B virus panel, liver enzyme panel, protein electrophoresis, and liver-spleen scan. The majority of the donors were also tested for the following: Fe/TIBC, ceruloplasm/Cu, ANA, ASMA, AMA, and fasting blood sugar.

Results

Table 1 shows the results of the ALT tests as well as details of the medical history. The results of the CBC, PT, PTT, and serum protein electrophoresis were within normal limits for all of the donors. Where tested, the Fe/TIBC, ceruloplasm/Cu, AMA, and ASMA were all normal. One donor (#8) had an elevated blood sugar of 142 mg/dl. One donor (#2) had a mildly elevated ANA 1:80 on one occasion.

Evaluation of the liver biopsies revealed 1+, 2+, and 3+ steatosis, on a scale of four, in four, two, and two of the donors, respectively. A rare neutrophil in association with individual hepatocellular degeneration was seen in all of the biopsies. The architecture was essentially normal in all, except in one case, which had 1+ fibrosis with some bridging and a slightly nodular configuration. A slight increase in fibrous material was present in three additional cases. In one case (#5), there were occasional plasma cells, neutrophils and lymphocytes. In another case, there was a mild increase in lymphocytes. In summary, the most consistent significant finding was steatosis.

Discussion

This study and the study by Sampliner[4] reveal similar findings of steatosis in asymptomatic blood donors with elevated ALT levels and no other abnormal liver function tests. Steatosis is associated with many disorders, including diabetes mellitus, obesity and alcoholism. Steatosis is only one of the multifarious causes of an elevated ALT. According to the studies by Jorke,[3] the finding of steatosis does not exclude hepatitis. In blood donors with HbsAg positivity, Jorke found on liver biopsy 42% with hepatitis and/or cirrhosis, 41% normal and 17% with steatosis. From these findings one cannot conclude that a blood donor with an elevated ALT level and steatosis is *not* a carrier of hepatitis B and most likely non-A and non-B as well. Consequently, a liver biopsy should not be used to evaluate whether a blood donor with the isolated finding or persistently elevated ALT may be returned to active donor status.

How much of an evaluation a blood donor with an elevated ALT should receive is a difficult question to answer. This study and Sampliner's study suggest that in the case of an individual donor with a mildly elevated ALT level and no disease state — as suggested by abnormal viral studies and abnormal Fe/TIBC, ferritin, ANA, CBC, PT, blood sugar, ceruloplasm/Cu and serum protein electrophoresis, and as suggested by a normal history and physical examination — a liver biopsy is not indicated. Considering the incidence of cryptogenic cirrhosis, further long-term epidemiologic studies of persons with elevated ALT levels and minimal liver pathology — i.e. steatosis, slight to mild fibrosis and a slight smount of individual hepatocyte degeneration — does appear indicated. In developing such a study, consideration should be given to the timing and frequency of the liver biopsies and to include non-obese and non-drinking donors for controls.

In summary, a mildly elevated ALT in a blood donor is most likely associated with steatosis on liver biopsy; a biopsy cannot rule out an asymptomatic carrier state.

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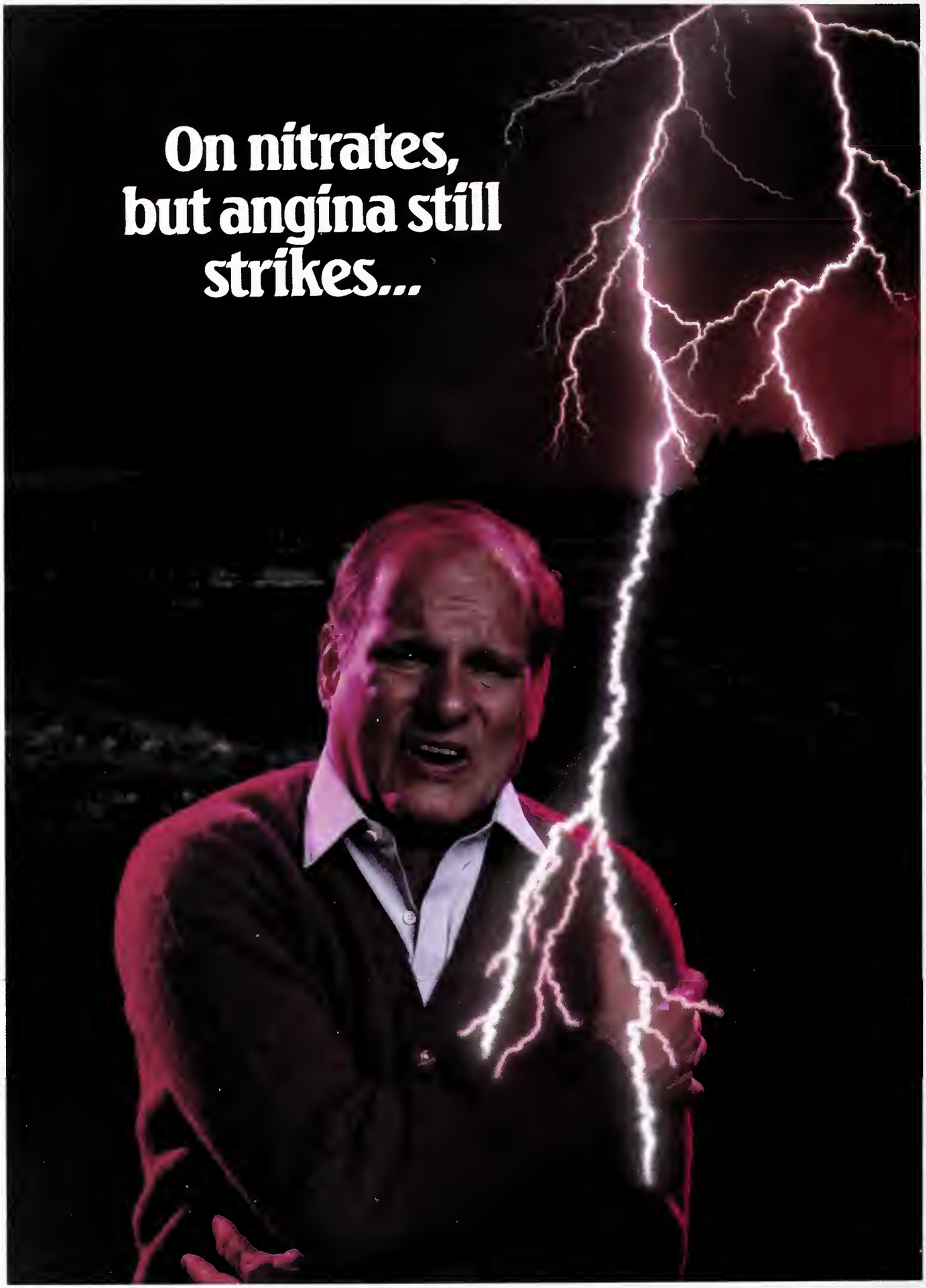
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(See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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Oct. 12-20, 1985	Annual International Body Imaging Conference, Department of Radiology, West Park Hospital, 22141 Roscoe Blvd., Canoga Park, Calif. 91304, (818) 340-0580, x280. Travel agent: Innovations in Travel, 9545 Reseda Blvd., Northridge, Calif. 91324, (818) 701-1164. Location: Maui Marriott.
Oct. 12-14, 1985	129th Annual Scientific Meeting, Hawaii Medical Association, Jennie Asato, H.M.A., 320 Ward Ave., Suite 200, Honolulu, Hawaii 96815, (808) 536-7702. Location: Kona Surf Resort, Big Island.
Oct. 17, 26, 1985	CSA Hawaiian Seminar on Clinical Anesthesiology, California Society of Anesthesiologists, 100 South Ellsworth Ave., Suite 806, San Mateo, Calif. 94401, (415) 348-1407. Location: Maui.
Oct. 19-22, 1985	New Approaches to the Evaluation of Neoplastic Lymphoproliferative Disorders, University of Southern California, Dept. of Pathology, 2025 Zonal Ave., Los Angeles, Calif. 90033, (213) 224-7121. Location: Wailea Beach Hotel, Maui.
Oct. 19-26, 1985	Operative Arthroscopy, University of California at Los Angeles, Continuing Education in Health Sciences, 10995 Le Conte Ave., Room 614, Los Angeles, Calif. 90024, (213) 825-8423. Location: Maui Marriott.
Oct. 31-Nov. 2, 1985	Moral Issues in Medicine, Hawaii Medical Association, National Federation of Catholic Physicians' Guilds and St. Francis Hospital, Gail Okamura, Director of Education, St. Francis Hospital, 2230 Liliha St., Honolulu, Hawaii 96817, (808) 547-6410. Location: Hilton Hawaiian Village.

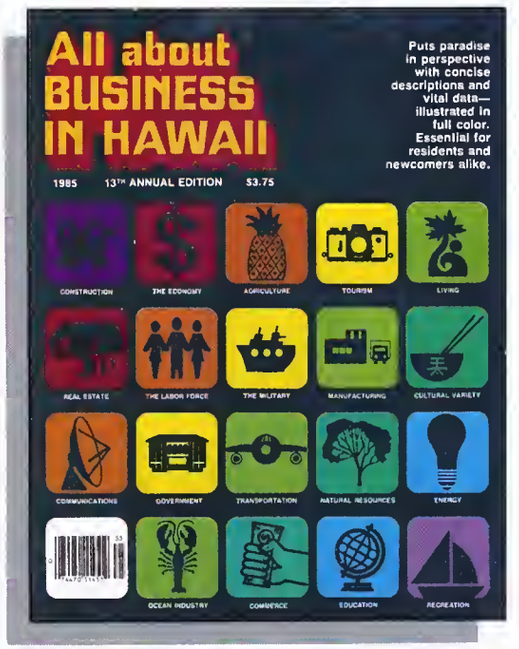
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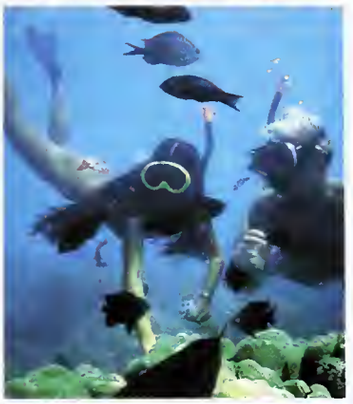
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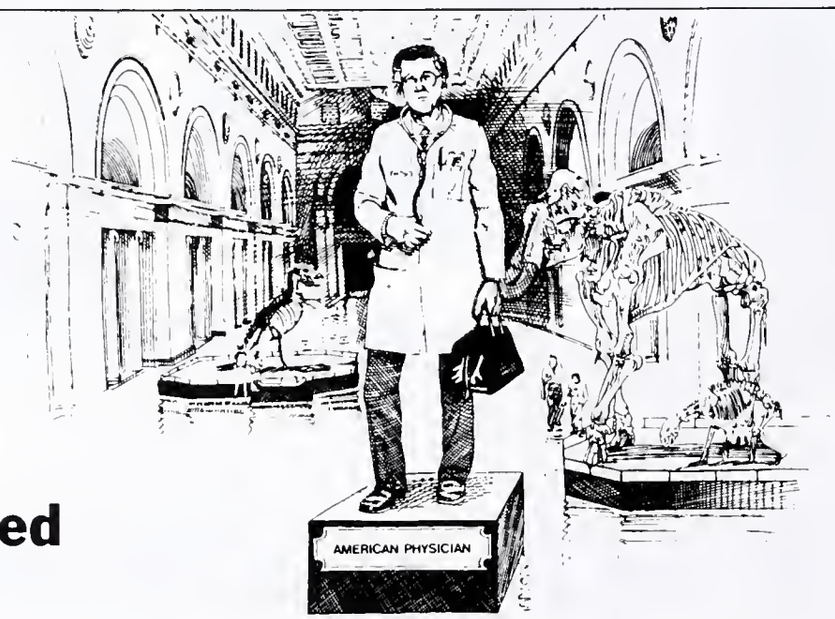
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Nov. 18-20, 1985	Hawaii Pediatric Gastroenterology Conference, Delia Chang, Continuing Medical Education, 1319 Punahou St., #816, Honolulu, Hawaii 96826, (808) 948-6949. Location: Kapiolani Women's and Children's Medical Center.
Dec. 26-30, 1985	Allergy, Drugs and Drug Allergies, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 1-4, 1986	Rheumatology and Immunology, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 13-17, 1986	Pan Pacific Surgical Association, Charlotte Winget, P.O. Box 553, Honolulu, Hawaii 96809, (808) 523-8978. Location: Sheraton Waikiki.
Jan. 18-25, 1986	Seventh Annual Royal Hawaiian Eye Meeting, Chuck Williams, Hawaiian Eye Foundation, 1600 Ala Moana, #1902, Honolulu, Hawaii 96815, (808) 955-1708. Location: Royal Lahaina Hotel, Maui.
Jan. 27-31, 1986	Fourth Annual Hawaii Conference on Gastrointestinal and Hepatic Diseases, Hawaii Medical Association, Gary Glober, MD, 1380 Lusitana St., #701, Honolulu, Hawaii 96813, (808) 536-1021. Location: Mauna Kea Beach Hotel, Big Island.
Feb. 4-7, 1986	Cardiology Update, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677, (714) 495-4499. Location: Honolulu.
Feb. 17-21, 1986	Geriatric Medicine in Practice — 1986: Workshops with Experts, co-sponsored by Kuakini Geriatric Center, Pacific Geriatric Education Center, Location: Hawaiian Regent Hotel.
Feb. 17-21, 1986	"Hawaii '86: Update to Common Problems in Primary Care," Pacific Institute of Continuing Medical Education, Inc., P.O. Box 1059, Kauai, Hawaii. Michael Murray, MD. Location: Waiohai Hotel, Kauai.
Feb. 19-27, 1986	Cardiology Update — 1986, Straub Clinic and Hospital and the Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677, (714) 495-4499. Location: Sheraton-Waikiki Hotel and Wailea, Maui.
March 24-28, 1986	OB/Gyn Update 1986, co-sponsored with the University of Washington School of Medicine, Department of OB/Gyn. Location: Waiohai Hotel, Kauai.
March 26-28, 1986	Psychiatry in the '90s: Today's Practice and Tomorrow's Perspectives, co-sponsored by Tripler Army Medical Center, the Colorado Psychiatric Society and the Hawaii Psychiatric Society. Location: Waiohai Hotel, Kauai.



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Hawaii Medical Journal

CONTENTS

Editorials: 414
Steven M. Moser, MD
The Nobel Prize for Peace
1983 Experience of the MMCP
J.I. Frederick Reppun, MD

Continuing Medical Education 416

Hawaii Academy of Family Physicians News 416

The Home Apnea Monitoring Program 419
For Newborns: The First 300 Patients
Michael J. Light, MB, MRCP (U.K.)
Mary S. Sheridan, PhD, ACSW

The Syndrome of Immediate Reactivities 426
(Contact Urticaria Syndrome)
An Historical Study
From a Dermatological Practice
I. Age, Sex, Race, and Putative Substances
David J. Elpern, MD

Over the Editor's Desk 440
J.I. Frederick Reppun, MD

HMA Auxiliary Newsletter 442
Lila Johnson

News & Notes 444
Henry Yokoyama, MD

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after Same patient after ten days of Bactrim (trimethoprim and sulfamethoxazole/Roche) therapy

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Simple to take.

ROCHE

in acute otitis media

- **Penetrates and clears middle-ear fluid of susceptible strains of *H. influenzae* and *S. pneumoniae*[1]**
- **Reduces evidence of inflammation and bulging eardrum[2]**
- **Results in a reduction of fever, pain and other symptoms[2,3]**

Active against 86% of *H. influenzae in vitro*—even amoxicillin- and ampicillin-resistant strains

Overall, 86% of *Haemophilus influenzae* strains taken from sputum cultures prove susceptible *in vitro* to Bactrim.[4] In one study, 100% of 191 ampicillin-resistant *H. influenzae* isolates were susceptible to Bactrim.[5] However, *in vitro* data do not necessarily correlate with clinical results.

Active against 91% of *S. pneumoniae in vitro*

In sputum cultures of *Streptococcus pneumoniae,* the most frequent pathogen in acute otitis media, 91% of isolates show susceptibility *in vitro* to Bactrim.[4]

Excellent clinical activity—and economical

In comparative clinical trials in children with acute otitis media, Bactrim *b.i.d.* was unsurpassed by ampicillin, amoxicillin or cefaclor.[6]
And the average cost of Bactrim is lower than that of cefaclor and comparable to that of ampicillin and amoxicillin.[7]
Bactrim is indicated in acute otitis media due to susceptible organisms when it offers an advantage over other antimicrobials. Bactrim is contraindicated in pregnancy, lactation, infants under two months of age and documented megaloblastic anemia due to folate deficiency. To date, there are limited data on the safety of repeated use of Bactrim in children under two years of age.

Cherry-flavored suspension

Bactrim™ Pediatric



(trimethoprim and sulfamethoxazole/Roche)

B.I.D. for enhanced compliance.

References: 1. Klimek JJ *et al: J Pediatr 96*:1087-1089, Jun 1980. **2.** Schwartz RH *et al: Rev Infect Dis 4*:514-516, Mar-Apr 1982. **3.** Cooper J, Inman JS, Dawson AF: *Practitioner 217*:804-809, Nov 1976. **4.** Antibiotic Sensitivity Report, Winter 1983. BAC-DATA Medical Information Systems, Inc. **5.** Data on file, Hoffmann-La Roche Inc., Nutley, NJ. **6.** Wormser GP, Keusch GT, Heel RC: *Drugs 24*:459-518, Dec 1982. **7.** *Med Lett Drugs Ther 23*:93-95, Oct 30, 1981

Please see summary of product information on the following page.

BACTRIM™ (trimethoprim and sulfamethoxazole/Roche)
Before prescribing, please consult complete product information, a summary of which follows:
CONTRAINDICATIONS: Hypersensitivity to trimethoprim or sulfonamides; documented megaloblastic anemia due to folate deficiency; pregnancy at term and during the nursing period; infants less than two months of age.
WARNINGS: FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS.
BACTRIM SHOULD BE DISCONTINUED AT THE FIRST APPEARANCE OF SKIN RASH OR ANY SIGN OF ADVERSE REACTION. Clinical signs, such as rash, sore throat, fever, pallor, purpura or jaundice, may be early indications of serious reactions. In rare instances a skin rash may be followed by more severe reactions, such as Stevens-Johnson syndrome, toxic epidermal necrolysis, hepatic necrosis or serious blood disorder. Perform complete blood counts frequently.
BACTRIM SHOULD NOT BE USED IN THE TREATMENT OF STREPTOCOCCAL PHARYNGITIS. Clinical studies show that patients with group A β-hemolytic streptococcal tonsillopharyngitis have a greater incidence of bacteriologic failure when treated with Bactrim than with penicillin.
PRECAUTIONS:
General: Give with caution to patients with impaired renal or hepatic function, possible folate deficiency and severe allergy or bronchial asthma. In glucose-6-phosphate dehydrogenase-deficient individuals, hemolysis may occur, frequently dose-related.
Information for Patients: Instruct patients to maintain adequate fluid intake to prevent crystalluria and stone formation.
Laboratory Tests: Perform complete blood counts frequently; if a significant reduction in the count of any formed blood element is noted, discontinue Bactrim. Perform urinalyses with careful microscopic examination and renal function tests during therapy, particularly for patients with impaired renal function.
Drug Interactions: In elderly patients concurrently receiving certain diuretics, primarily thiazides, an increased incidence of thrombocytopenia with purpura has been reported. Bactrim may prolong the prothrombin time in patients who are receiving the anticoagulant warfarin. Keep this in mind when Bactrim is given to patients already on anticoagulant therapy and reassess coagulation time. Bactrim may inhibit the hepatic metabolism of phenytoin. Given at a common clinical dosage, it increased the phenytoin half-life by 39% and decreased the phenytoin metabolic clearance rate by 27%. When giving these drugs concurrently, be alert for possible excessive phenytoin effect. Sulfonamides can displace methotrexate from plasma protein binding sites, thus increasing free methotrexate concentrations.
Drug/Laboratory Test Interactions: Bactrim, specifically the trimethoprim component, can interfere with a serum methotrexate assay as determined by the competitive binding protein technique (CBPA) when a bacterial dihydrofolate reductase is used as the binding protein. No interference occurs if methotrexate is measured by a radioimmunoassay (RIA). The presence of trimethoprim and sulfamethoxazole may also interfere with the Jaffé alkaline picrate reaction assay for creatinine, resulting in overestimations of about 10% in the range of normal values.
Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenesis: Long-term studies in animals to evaluate carcinogenic potential not conducted with Bactrim. *Mutagenesis:* Bacterial mutagenic studies not performed with sulfamethoxazole and trimethoprim in combination. Trimethoprim demonstrated to be nonmutagenic in the Ames assay. No chromosomal damage observed in human leukocytes *in vitro* with sulfamethoxazole and trimethoprim alone or in combination; concentrations used exceeded blood levels of these compounds following therapy with Bactrim. Observations of leukocytes obtained from patients treated with Bactrim revealed no chromosomal abnormalities. *Impairment of Fertility:* No adverse effects on fertility or general reproductive performance observed in rats given oral dosages as high as 70 mg/kg/day trimethoprim plus 350 mg/kg/day sulfamethoxazole.
Pregnancy: Teratogenic Effects: Pregnancy Category C. Trimethoprim and sulfamethoxazole may interfere with folic acid metabolism; use during pregnancy only if potential benefit justifies potential risk to fetus. Nonteratogenic Effects: See CONTRAINDICATIONS section.
Nursing Mothers: See CONTRAINDICATIONS section.
Pediatric Use: Not recommended for infants under two months (see INDICATIONS and CONTRAINDICATIONS sections).
ADVERSE REACTIONS: Most common are gastrointestinal disturbances (nausea, vomiting, anorexia) and allergic skin reactions (such as rash and urticaria). **FATALITIES ASSOCIATED WITH THE ADMINISTRATION OF SULFONAMIDES, ALTHOUGH RARE, HAVE OCCURRED DUE TO SEVERE REACTIONS, INCLUDING STEVENS-JOHNSON SYNDROME, TOXIC EPIDERMAL NECROLYSIS, FULMINANT HEPATIC NECROSIS, AGRANULOCYTOSIS, APLASTIC ANEMIA AND OTHER BLOOD DYSCRASIAS (SEE WARNINGS SECTION).** *Hematologic:* Agranulocytosis, aplastic anemia, thrombocytopenia, leukopenia, neutropenia, hemolytic anemia, megaloblastic anemia, hypoprothrombinemia, methemoglobinemia, eosinophilia. *Allergic Reactions:* Stevens-Johnson syndrome, toxic epidermal necrolysis, anaphylaxis, allergic myocarditis, erythema multiforme, exfoliative dermatitis, angioedema, drug fever, chills, Henoch-Schoenlein purpura, serum sickness-like syndrome, generalized allergic reactions, generalized skin eruptions, photosensitivity, conjunctival and scleral injection, pruritus, urticaria and rash. Periarteritis nodosa and systemic lupus erythematosus have been reported. *Gastrointestinal:* Hepatitis (including cholestatic jaundice and hepatic necrosis), elevation of serum transaminase and bilirubin, pseudomembranous enterocolitis, pancreatitis, stomatitis, glossitis, nausea, emesis, abdominal pain, diarrhea, anorexia. *Genitourinary:* Renal failure, interstitial nephritis, BUN and serum creatinine elevation, toxic nephrosis with oliguria and anuria, crystalluria. *Neurologic:* Aseptic meningitis, convulsions, peripheral neuritis, ataxia, vertigo, tinnitus, headache. *Psychiatric:* Hallucinations, depression, apathy, nervousness. *Endocrine:* Sulfonamides bear certain chemical similarities to some goitrogens, diuretics (acetazolamide and the thiazides) and oral hypoglycemic agents; cross-sensitivity may exist. Diuresis and hypoglycemia have occurred rarely in patients receiving sulfonamides. *Musculoskeletal:* Arthralgia, myalgia. *Miscellaneous:* Weakness, fatigue, insomnia.
DOSAGE AND ADMINISTRATION: Not recommended for use in infants less than two months of age.
URINARY TRACT INFECTIONS AND SHIGELLOSIS IN ADULTS AND CHILDREN, AND ACUTE OTITIS MEDIA IN CHILDREN: *Usual adult dosage* for urinary tract infections is one DS tablet, two tablets or four teaspoonfuls (20 ml) *b.i.d.* for 10 to 14 days. Use identical daily dosage for 5 days for shigellosis. *Recommended dosage for children* with urinary tract infections or acute otitis media is 8 mg/kg trimethoprim and 40 mg/kg sulfamethoxazole per 24 hours, in two divided doses every 12 hours for 10 days. Use identical daily dosage for 5 days for shigellosis. *Renal Impaired:* Creatinine clearance above 30 ml/min, give usual dosage; 15-30 ml/min, give one-half the usual regimen; below 15 ml/min, use not recommended.
ACUTE EXACERBATIONS OF CHRONIC BRONCHITIS IN ADULTS: Usual adult dosage is one DS tablet, two tablets or four teasp. (20 ml) *b.i.d.* for 14 days.
PNEUMOCYSTIS CARINII PNEUMONITIS: Recommended dosage is 20 mg/kg trimethoprim and 100 mg/kg sulfamethoxazole per 24 hours in equal doses every 6 hours for 14 days. See complete product information for suggested children's dosage table.
HOW SUPPLIED: *DS (double strength) Tablets* (160 mg trimethoprim and 800 mg sulfamethoxazole)—bottles of 100, 250 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 20. *Tablets* (80 mg trimethoprim and 400 mg sulfamethoxazole)—bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40. *Pediatric Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 100 ml and 16 oz (1 pint). *Suspension* (40 mg trimethoprim and 200 mg sulfamethoxazole per teasp.)—bottles of 16 oz (1 pint).
STORE TABLETS AT 15°-30°C (59°-86°F) IN A DRY PLACE PROTECTED FROM LIGHT
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Steven M. Moser, MD

Just 10 years out of medical school (University of Texas-Southwestern), this young internist and nephrologist on Maui has achieved a pinnacle not usually vouchsafed to one so young. His colleagues in the Hawaii Medical Association named him "Physican of the Year" at the 129th annual meeting of the Association in Kona in October, and the A.H. Robbins Pharmaceutical Company donated a handsome plaque inscribed "For Community Service."

This does not mean that Moser has no more pinnacles left to climb; we can rest assured he will not be resting on his laurels. As Edwin Tanji of The Advertiser's Maui Bureau reported the next day: "It's that ethic (social responsibility) that drives Steve Moser."

Moser credits his famous father, Robert, formerly editor of JAMA and now head of the American College of Physicians, once a Maui resident, with infusing this into his blood at an early age. And his wife, Kathy, is right there with him, an activist in her own right.

Young Moser's energy seems limitless and its direction multifaceted both within and outside the profession. He feels strongly that humankind is at a major fork in the road ahead. One fork points the way to increasing militarism and the danger of worldwide conflict and destruction. The signpost on the other fork simply reads "Geneva."

Moser says: "If we the people let the moment of trust pass by without our direct input towards making the right choice, there may never come another chance. These next few weeks are crucial."

More power to you; the HMA (and PSR) are proud to have you with us!

J.I. Frederick Reppun
Editor

The Nobel Prize for Peace

In every one of 41 countries that have organizations of physicians and their medical supporters who are dedicated to educating the public about the terrible medical consequences and global destruction inherent in an exchange of nuclear bombs, there is jubilation over the award of the Nobel Prize for Peace to IPPNW — the International Physicians for the Prevention of a Nuclear War — which is the umbrella group that takes them all in. In the United States, the component is PSR, with 35,000 members in 154 chapters; the Hawaii Chapter has more than 220 members, of which 80% are physicians.

PSR stands for Physicians for Social Responsibility. The organization was started in Boston 25 years ago. Its name fails to signify its purpose, which is focused almost exclusively on trying to prevent a nuclear war.

PSR's founders perhaps sought to persuade physicians to come out of their offices and hospitals and to become involved in matters of medical import for the world as a whole, hence the term "social responsibility." There was never an intent to separate "responsible" physicians from "irresponsible" ones. PSR, however, has often been derided for intimating such a distinction by virtue of its title.

There never was, and is not now, any intent to persuade the United States to do away with its nuclear arsenal unilaterally. PSR has been tarred with that brush unfairly, as it has been labeled "Red."

The name PSR has stuck; perhaps now the organization should unfold and raise its umbrella and adopt a new acronym: IPPNW-PSR/USA! At any rate, it is the largest component of IPPNW (the Russians claim a membership of 100,000 in theirs!) and PSR can claim to be the "mother" of the Nobel prize-winning, five-year-old offspring that has grown exponentially to a membership of 145,000, because IPPNW's parents are Bernard Lown, MD, of the Harvard School of Public Health, one of the founders of PSR, and Evgeny Chazov, a Soviet academician and cardiologist of considerable eminence in the U.S.S.R.

The significance of the Nobel award, rarely given to a whole, amorphous organization rather than an individual, lies as much in its timing as in its particular choice, i.e., at a time when the Geneva arms talks have resumed and the "summit meeting" between President Reagan and General Secretary Gorbachev is imminent. This combination of events has generated a fervent hope among all nations on this common planet of ours that the meetings between the two "superpowers" will be fruitful in the sense of defusing the bombs. The prize for peace, given to the co-chairmen of IPPNW — one a respected American physician, the other an equally eminent Soviet doctor — seems propitious for a genuine reapproachment between two great nations; two societies with vastly different political structures, but with similar ideologies: Their people want peace and not war!

As members of our profession, as healers of mankind's ills, we physicians all over the world can bask in the glow of the award.

J.I. Frederick Reppun, MD
Editor

1983 Experience of the MMCP

Attorney Rene McWade, RN JD, addressed the Medical Malpractice Law Committee of the Hawaii Medical Association at its meeting Aug. 1. She reviewed the background of legislation in Hawaii on the subject of medical malpractice and the establishment of the Medical Malpractice Conciliation Panel made up of a physician and two attorneys, one of the latter presiding as chairman. She cited and provided members with copies of excerpts of the pertinent Hawaii Revised Statutes (HRS) for their edification.

Of particular interest was the information provided in the table below, giving the raw experience of the MMCP in 1983.

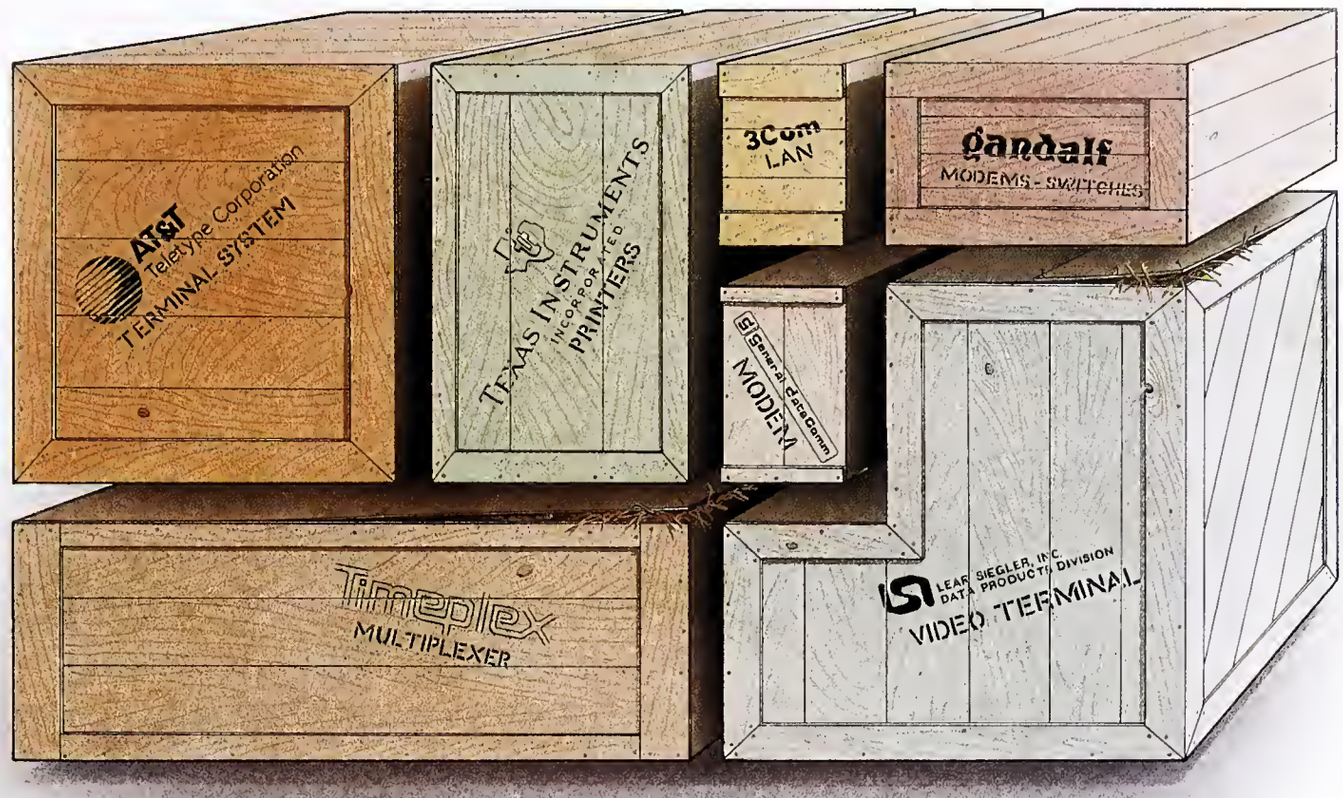
J.I. Frederick Reppun, MD
Editor

TABLE 1.

	# of cases	%
No negligence found	63	61
Probable negligence	23	22
Settled out of court*	2	2
Ultimately withdrawn or dismissed*	11	10
Claims registered but never got to panel	5	5
Total	104	100%

* Undetermined whether malpractice proven or not.

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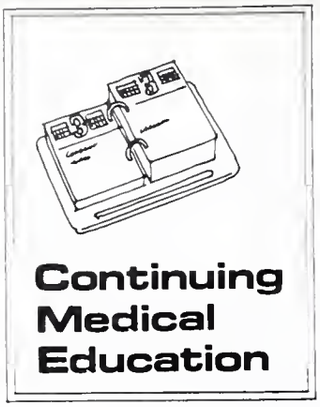
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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

Accredited Programs of CME allow one unit of AMA credit for each hour of instruction excluding all "breaks." Some programs also are accredited for AAFP prescribed credit.

LOCAL ACCREDITED PROGRAMS
ONGOING

For a complete list of ongoing programs, please refer to the September 1985 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

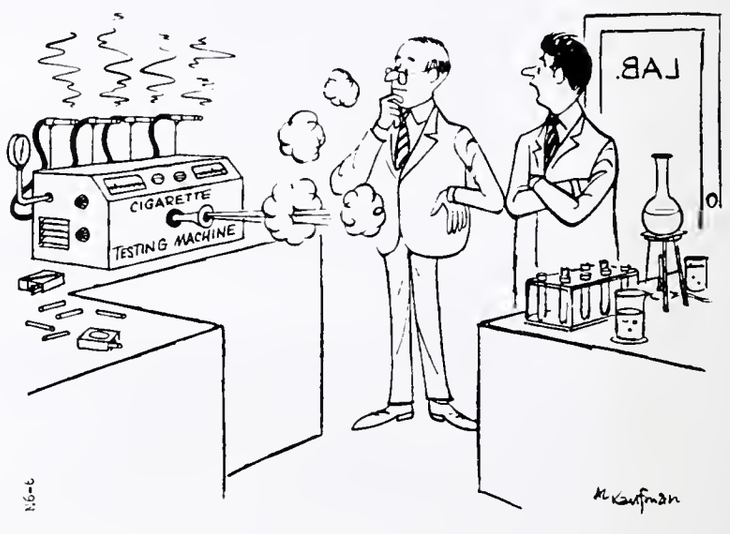
SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Nov. 1-6, 1985	ACOG District VIII Meeting, American College of OB/Gyn, 600 Maryland Ave. S.W., Washington, D.C. 20024-2558, (202) 638-5577. Location: Hyatt Regency Maui.
Nov. 15, 1985	Diabetes Symposium for Professionals, American Diabetes Association HI Affiliate, 1250 Punchbowl St., Honolulu 96813, (808) 548-5836.
Nov. 18-20, 1985	Hawaii Pediatric Gastroenterology Conference, Delia Chang, Continuing Medical Education, 1319 Punahou St., #816, Honolulu, Hawaii 96826, (808) 948-6949. Location: Kapiolani Women's and Children's Medical Center.
Dec. 26-30, 1985	Allergy, Drugs and Drug Allergies, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 1-4, 1986	Rheumatology and Immunology, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 13-17, 1986	Pan Pacific Surgical Association, Charlotte Winget, P.O. Box 553, Honolulu, Hawaii 96809, (808) 523-8978. Location: Sheraton Waikiki.
Jan. 18-25, 1986	Seventh Annual Royal Hawaiian Eye Meeting, Chuck Williams, Hawaiian Eye Foundation, 1600 Ala Moana, #1902, Honolulu, Hawaii 96815, (808) 955-1708. Location: Royal Lahaina Hotel, Maui.
Jan. 27-31, 1986	Fourth Annual Hawaii Conference on Gastrointestinal and Hepatic Diseases, Hawaii Medical Association, Gary Glober, MD, 1380 Lusitana St., #701, Honolulu, Hawaii 96813, (808) 536-1021. Location: Mauna Kea Beach Hotel, Big Island.
Feb. 4-7, 1986	Cardiology Update, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677, (714) 495-4499. Location: Honolulu.
Feb. 17-21, 1986	Geriatric Medicine in Practice — 1986: Workshops with Experts, co-sponsored by Kuakini Geriatric Center, Pacific Geriatric Education Center, Location: Hawaiian Regent Hotel.
Feb. 17-21, 1986	"Hawaii '86: Update to Common Problems in Primary Care," Pacific Institute of Continuing Medical Education, Inc., P.O. Box 1059, Kauai, Hawaii. Michael Murray, MD. Location: Waiohai Hotel, Kauai.
Feb. 19-27, 1986	Cardiology Update — 1986, Straub Clinic and Hospital and the Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677, (714) 495-4499. Location: Sheraton-Waikiki Hotel and Wailea, Maui.
March 24-28, 1986	OB/Gyn Update 1986, co-sponsored with the University of Washington School of Medicine, Department of OB/Gyn. Location: Waiohai Hotel, Kauai.
March 26-28, 1986	Psychiatry in the '90s: Today's Practice and Tomorrow's Perspectives, co-sponsored by Tripler Army Medical Center, the Colorado Psychiatric Society and the Hawaii Psychiatric Society. Location: Waiohai Hotel, Kauai.

HAFP Annual Meeting and Seminar

Plans are now being finalized for the Hawaii Academy of Family Physicians Annual Meeting, set for Feb. 22 and 23, 1986, at the Hilton Hawaiian Village. The title of the seminar will be "Orthopedics and Rheumatology for the Family Physician." It will include lectures by prominent experts in the field as well as some practical demonstrations. HAFP members, please look for your programs in the mail soon and register early!



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The Home Apnea Monitoring Program for Newborns: The First 300 Patients

Michael J. Light, MB, MRCP (U.K.)*
Mary S. Sheridan, PhD, ACWS**

Monitoring the care of 300 Hawaii pediatric patients at home, from February 1981 to July 1984, was carried out under the supervision of a program located at Kapiolani Women's and Children's Medical Center.

Major groups of patients served included prematures, patients with a history of a "near miss" (emergency apneic) episode and subsequent younger siblings of Sudden Infant Death Syndrome (SIDS) victims. The average patient was monitored for 5.78 months (S.D. = 6.75); 50% were reported by parents to have had at least one episode of apnea or bradycardia at home.

Six infants died, but only one death was clearly related to apnea and probably preventable. With proper parent orientation and support, monitoring at home is an acceptable and cost-effective means of managing medical risk and parental anxiety.

The establishment of programs across the nation for the home cardio-respiratory monitoring of certain high-risk infants reflects the concerns of both parents and medical professionals. Most publicized among these has been the fear of Sudden Infant Death Syndrome, or SIDS, although the present lack of substantive progress in identifying the pathology of SIDS, and thus the inability to predict or prevent it, makes this a questionable reason to monitor.

With increased attention to respiratory control in infancy, at least in part a by-product of greater monitoring of neonates in intensive care units, has also come the recognition that — whatever their relationship to SIDS — infantile apneas and bradycardias are too substantial a problem to be ignored.[1] Parents as well as professionals worry about what will happen to a baby who has had apneic episodes requiring stimulation or even resuscitation, or who appears at high risk for such episodes. Use of a home monitor in such circumstances appears to be a relatively cost-effective means of management, at least for the parent. Yet the widespread monitoring of all children also raises questions.[2]

What are the medical and psychological outcomes for these infants and their families? Is monitoring an appropriate means of risk management? Can it be used appropriately, or does it represent only the latest technological fad? This article is an attempt to answer such questions for Hawaii.

An organized approach to home monitoring began in Hawaii at Kapiolani Women's and Children's Medical Center early in 1981. Presently, monitored infants and their families receive consulta-

Kapiolani Women's and Children's Medical Center, 1319 Punahou St., Honolulu 96822

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TABLE 1.
Demographic Information

	Monitored Patients	All Birth in Hawaii, 1983*
Males	158 (53%)	(52%)
Females	142 (47%)	(48%)
Oahu**	213 (71%)	(77%)
Honolulu	87 (29%)	(31%)
Windward	42	
Central/N. Shore	6 (42%)	(46%)
Leeward	78	
Neighbor Islands	51 (17%)	(23%)
Hawaii	23 (8%)	(10%)
Kauai	11 (4%)	(4%)
Lanai	0	
Maui	14 (4%)	(9%)
Molokai	3 (1%)	
Left Hawaii	36 (12%)	—
Caucasian†	91 (30%)	(24%)
Hawaiian/Pt. H.	84 (28%)	(30%)
Filipino	41 (14%)	(13%)
Japanese	24 (8%)	(13%)
Chinese	15 (5%)	(4%)
Black	10 (3%)	(4%)
Other/Unknown	35 (12%)	(12%)
Private Insurance††	115	
CHAMPUS	81	
HMO	10	
DSSH	91	
No medical coverage	2	

*Per DOH statistics.[13] Total births in Hawaii for 1983 = 19,164.
**Residence for monitored patients was as of 7/84. For infants born in Hawaii, residence was defined as that of the mother at the time of birth.
†Using DOH criteria for the ethnicity of the child.
††Primary coverage at the time monitoring was begun. DOH data not available.

TABLE 2.
Patients by Diagnosis

Time Period	Total Patients	"Near Miss"	Premature	Subsequent Siblings	Other**
2/81-7/81	16	6 (38%)	7 (44%)	1 (6%)	2 (12%)
8/81-1/82	26	7 (27%)	10 (39%)	5 (19%)	4 (15%)
2/82-7/82	34	18 (53%)	11 (32%)	0	5 (15%)
8/82-1/83	44	17 (39%)	21 (48%)	2 (4%)	4 (9%)
2/83-7/83	49	16 (33%)	15 (31%)	9 (18%)	9 (18%)
8/83-1/84	71	17 (24%)	31 (44%)	8 (11%)	15 (21%)
2/84-7/84	76	6 (8%)	44 (58%)	7 (9%)	19 (25%)
Totals*	300	87	139	32	58

*Totals by diagnosis add to 316, reflecting infants with multiple conditions.
**Primarily apnea in full-term infants, infants with congenital anomalies, and "second generation" babies.

tion and support under the aegis of the Pulmonary Service, with a physician-director and a home monitor-coordinator. By July 1984, the program had served 300 patients, a milestone prompting review of the experience as a whole and by patient diagnoses.

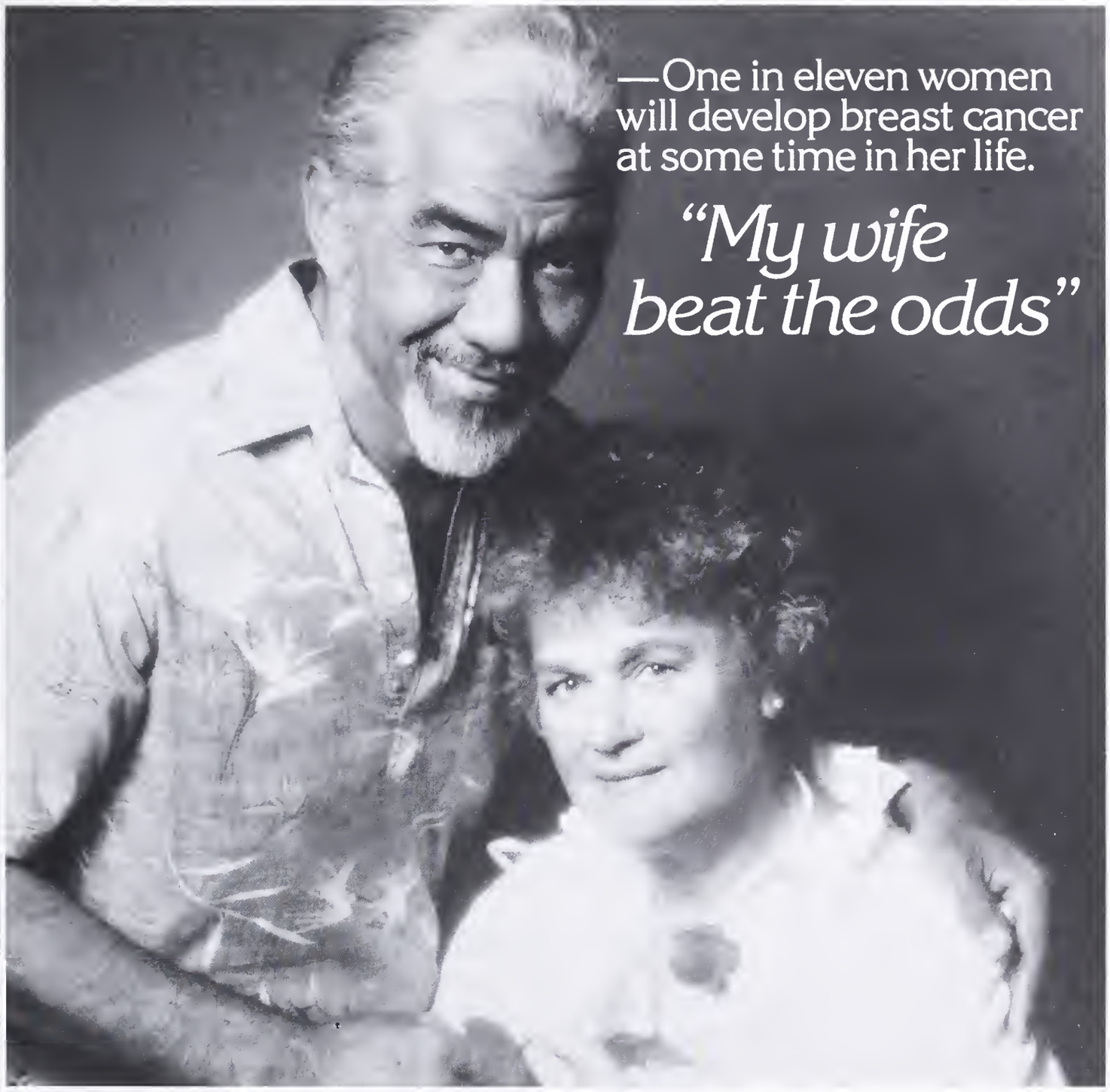
Diagnostic Categories

Demographic information about the first 300 patients is shown in Table 1. In general, monitored infants are representative of their cohort in the population at large. Of the first 300 patients, 13 used the monitor less than one week. All but two of the remainder have now completed their monitoring under KWCMC supervision. The average patient at the time of discharge had been monitored for 5-6 months. More than 98% of infants resolve their apnea by one year of age, although exceptions do occur; one patient to have episodes requiring mouth-to-mouth resuscitation up to three years of age. Of these 284 patients, 143, or 50.4%, were reported by parents to have had at least one apneic or symptomatic bradycardic episode at home.[3] The last such event occurred, on the average, during the third month of monitoring, with a range of one to 27. The vast majority of these events resolved themselves or with minimal stimulation, but a small number of infants (1-2%) required CPR. Six of the first 300 patients died, five of conditions not related to apnea.[4] The sixth death followed by two days a mother's decision not to monitor her actively apneic, ill child any longer. On autopsy this death was found to be due to pneumonia.

Since its inception, the Home Monitor Program has grown both in the number of children served and in the varieties and combinations of conditions evaluated. Table 2 shows the nature of this growth over time. The program has served three major groups of patients. These are: (1) Premature infants who have not spontaneously resolved breathing pauses or intermittent bradycardia by the time they are otherwise ready for discharge; (2) infants who have undergone apneic episodes requiring resuscitation at home (the so-called "near miss" or aborted SIDS infants[5]); and (3) infants born to families who have previously lost a baby to SIDS. Experiences with these patients are summarized in Table 3. Each of the major diagnostic groups has its own implications for monitoring, and is worthy of independent discussion.

Apnea of Prematurity

Apnea occurs in up to 30% of premature infants and is often resolved comfortably in advance of the time when the child is otherwise ready for discharge. Although prematurity is associated with SIDS, the premature infant with apnea is at no greater risk of SIDS than the premature without, again demonstrating the divergence between the two syn-



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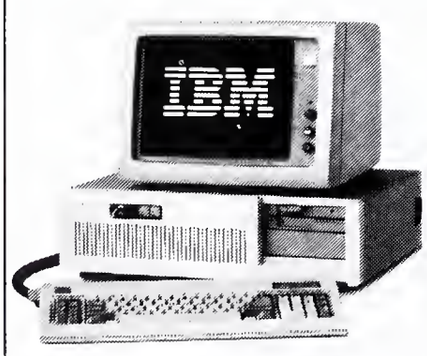
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dromes.[6]

Before the advent of home monitoring, the standard treatment for infants with persistent apnea was to monitor them in the hospital until they had been symptom-free for seven days, after which time discharge home was presumed to be safe. This course is still the one chosen for some infants. However, several considerations suggest that home monitoring can be valuable in such situations. These include the arbitrariness of a seven-day waiting period and the difficulty of predicting whether apnea will recur under stress, particularly if the child has a pulmonary problem sufficient to require xanthine therapy. (It is of note that almost 40% of our "near miss" infants were prematures with an average gestational age of 35.42 weeks.) In addition, it is cost-effective to monitor. At current intermediate nursery rates, at least seven months of monitoring at home can be provided for the cost of seven days of inpatient care.

At present the Home Monitor Program recommends that prematures be monitored if apnea or bradycardia is still present when the baby is otherwise ready for discharge, or of sufficient degree to require outpatient xanthine therapy. A pneumogram (12-hour recording of heart rate and respiration) may be a part of the decision-making process for both instituting and discontinuing monitoring and may reveal problems, such as an abnormal amount of periodic breathing (three pauses more than three seconds long, with no more than 20 seconds between each pause) or a number of short periods of apnea that have gone undetected in the nursery. At present, however, there is no good way to differentiate between those infants who will have apnea at home and those who will not.

Monitoring should be done until the infant is at least seven months of age, three months free of apneic or bradycardic episodes, and off xanthines.

The "Near Miss"

Apnea associated with prematurity is not an unexpected part of the perinatal course; it is usually discovered and managed in the hospital. Although stimulation may be required to restart breathing in a monitored premature, either at home or in the nursery, the apnea is generally not perceived as an emergency. A "near miss" is of quite a different character.

In the typical "near miss," a parent is not aware of any problem with the infant's respiratory control and simply happens to observe that the baby is suddenly not breathing. While there are always questions about such observations, the details provided by parents suggest that the event has often been of a serious, if not life-threatening, nature. Infants are generally described as pale or bluish, stiff, or limp. Parents are convinced that there is no respiration for a significant period — at least 15 seconds, often considerably more. Parents usually stimulate the baby through picking it up, shaking or rubbing it, blowing in its face, or beginning CPR if they know how to do it. They generally seek help from neighbors, paramedics, or hospital emergency rooms. Typically, by the time trained observers arrive, the child has resumed respiration, and color and tone are improved, although some children remain lethargic following the episode. The parents are emotionally shaken. There are, in such "near misses," two sets of considerations: (a) The medical management of the infant, including risk management; and (b) the psychological support of the parents.

Ideally, evaluation of the "near miss" is done in the hospital. A number of conditions either simulate apnea (e.g., seizure disorder) or have apnea as a component (e.g., pertussis). Apnea itself tends to be exacerbated by illness. Each infant should receive a thorough evaluation to determine the cause of the episode and whether any treatable conditions are associated with it.[7] It is frequent — but neither diagnostic nor prognostic — for such an evaluation to be non-productive and for the infant to show no further signs of apnea while in the hospital.

Clinically, in our experience, the "near miss" resembles Sudden Infant Death Syndrome. That is, it occurs in infants otherwise presumed to be normal, is more frequent in prematures, is frequently associated with mild infections, and is generally described as painless and without signs of struggle. While some children have symptoms of gastroesophageal reflux or nasopharyngeal obstruction associated with the episode, for most the origin appears to be central. The child simply seems to "forget" to breathe. The exception to this resemblance to SIDS seems to be in the age of occurrence: The peak incidence of SIDS is from two through six months of age, while the peak incidence of "near miss" in our patients has been in the first eight weeks of life, with occurrence rare past the fifth month. It must be pointed out, however, that while some researchers believe that apnea is the mechanism of SIDS[8] or is one of its mechanisms, apnea has been observed relatively infrequently in babies who have gone on to die of SIDS.[9] The Pulmonary Service of this Center takes no position on a relationship between apnea and SIDS, except to recognize that this is an area in which further information is sorely needed.

Parents who have gone through a "near miss" experience require special care. They frequently describe the experience as the most difficult they have ever endured, and frequently believe that, but for the merest chance, their baby would be dead. They are extremely sensitive to the implication that they might have imagined or exaggerated the episode; occasionally their observations are glossed over or dismissed by medical personnel, and this is something the families seldom forgive. Frequently, those who provide the care focus on the many possible alternative diagnoses, and the child almost always looks robustly healthy while in the hospital. Parents, by contrast, are reliving the moment when they discovered the non-breathing child and are wondering if they could cope with a repetition of the incident.

Monitoring is indicated for the sake of both infants and their families when an episode of emergency, ideopathic apnea can be reasonably presumed to have occurred. While few apneic episodes, subsequent to the "near miss," required more than vigorous stimulation, some children have needed mouth-to-mouth resuscitation, or even full CPR, before they resumed breathing. Almost all parents are receptive to a device that will give them some reassurance that the baby is not in trouble, and to training which will enable them to cope with such emergencies. They see the alternative quite clearly as the necessity to watch the baby continuously. The "shock waves" of the "near miss" continue on for months, if not years, for many families; parents frequently identify with the monitor as a major item of support as they try to cope and readjust. The Pulmonary Service recommends monitoring until the infant is at least seven months of age, has been free of any apneic episodes for at least three months and has had a normal pneumogram.

In Subsequent Siblings

Parents who have experienced the death of a child through SIDS are devastated by this loss. They are naturally concerned about the risks of a subsequent sudden infant death. Objectively, those risks may be seen in two ways. First, the risk of experiencing a second SIDS death is low in absolute terms, probably no more than 1%.[10] However, this is a significant increase over the SIDS rate for the nation as a whole, which is approximately one to two per thousand live births, and over the rate for Hawaii, just over one per thousand live births.[11]

The position of the Pulmonary Service has been the same as that taken by most centers throughout the nation and by the National SIDS Foundation. That is, monitoring can be of value in managing the anxiety of parents. Thus, it is our opinion that all SIDS parents should be properly apprised of the pros and cons of monitoring at home; they should understand that SIDS may be unrelated to apnea and may happen no matter what care is taken to prevent it. Presuming that no other risk factors have been identified, parents should be allowed to make their own decision, in consultation with the child's pediatrician, of whether monitoring fits into their lifestyle. Ideally, such counseling is undertaken before

the birth of the subsequent child. Our position, however, is taken with the recognition that a number of apneic epidsodes have been reported by parents among the subsequent siblings we have monitored. The Pulmonary Service recommends monitoring for seven to 12 months, with a pneumogram to be done before discharge from the program.

Mechanics of a Monitoring Program

Monitoring itself is far more complex than simply issuing a piece of equipment. Modern monitors have been designed specifically to provide hospital-level reliability, with ease of operation and portability. However, detailed information and instruction must be given, equipment service must be continuously available, and psycho-social and medical consultation and counseling must be provided if parents and primary physicians are to use monitors consistently and comfortably. In Hawaii, as in other areas of the country, it has appeared to be most feasible to centralize case management on one program. Arrangements are made for parents to receive CPR instruction, generally through the Department of Respiratory Therapy at KWCMC, and for monitor training through the monitor rental company. Follow-up is done shortly after home monitoring begins and at intervals thereafter to ensure that the equipment works well in the home and that parents are as comfortable as possible with it and with the baby's condition. Home visits, linkages with other monitoring families, and other supportive services are available as needed.

At the community and professional level, a good monitor program means ensuring that monitors are prescribed responsibly, with concern both for safety and cost-effectiveness. This means establishing good working relationships with sources of reimbursement and with equipment suppliers. It means evaluating new equipment for reliability and ease of operation, and for appropriateness in the home setting. It means keeping careful track of monitors so that they are used responsibly and returned in a timely manner.

Monitoring remains controversial in the medical community, but some of the fears expressed by practitioners have not come to pass. It has not been our experience, or that of other programs,[12] that monitoring, properly handled, induces more stress than it reduces. Rather, most parents report an increased sense of comfort with an already high-risk situation. Nor has it been our experience that parents are unable to assess their child's respiratory status, or are unable to respond appropriately to alarms. At all socio-economic and educational levels, virtually all parents are able to learn CPR and follow program recommendations. Nor has it been our experience that parents inappropriately demand monitors, or continue monitoring for an unreasonably long period.

Since 1981, the Monitor Program has seen rapid changes in the technology of equipment available for home use, and in the kinds and numbers of patients served. We have now participated, for example, in the evaluation and/or monitoring of several "second generation" babies whose older siblings were monitored.

We are finding (as have Mainland centers) that these infants too are at increased medical risk, and that their parents continue to experience the stress associated with vulnerable children. This has challenged us to update our mangement guidelines and patient education materials continually, reflecting our own clinical expereince and that of other centers. We are satisfied that, although we are one of the more "conservative" programs in the nation, we are well within the standards of good medical practice.

With the advent of DRGs and other cost-saving schemes, home-based care, becomes more attractive, particularly when it increases patient safety. The Pulmonary Service recognizes that, while there is likely to be a need for home monitoring in the foreseeable future, the ultimate answer is to be found in greater ability to predict which infants are at risk, and how best to assess and treat them.

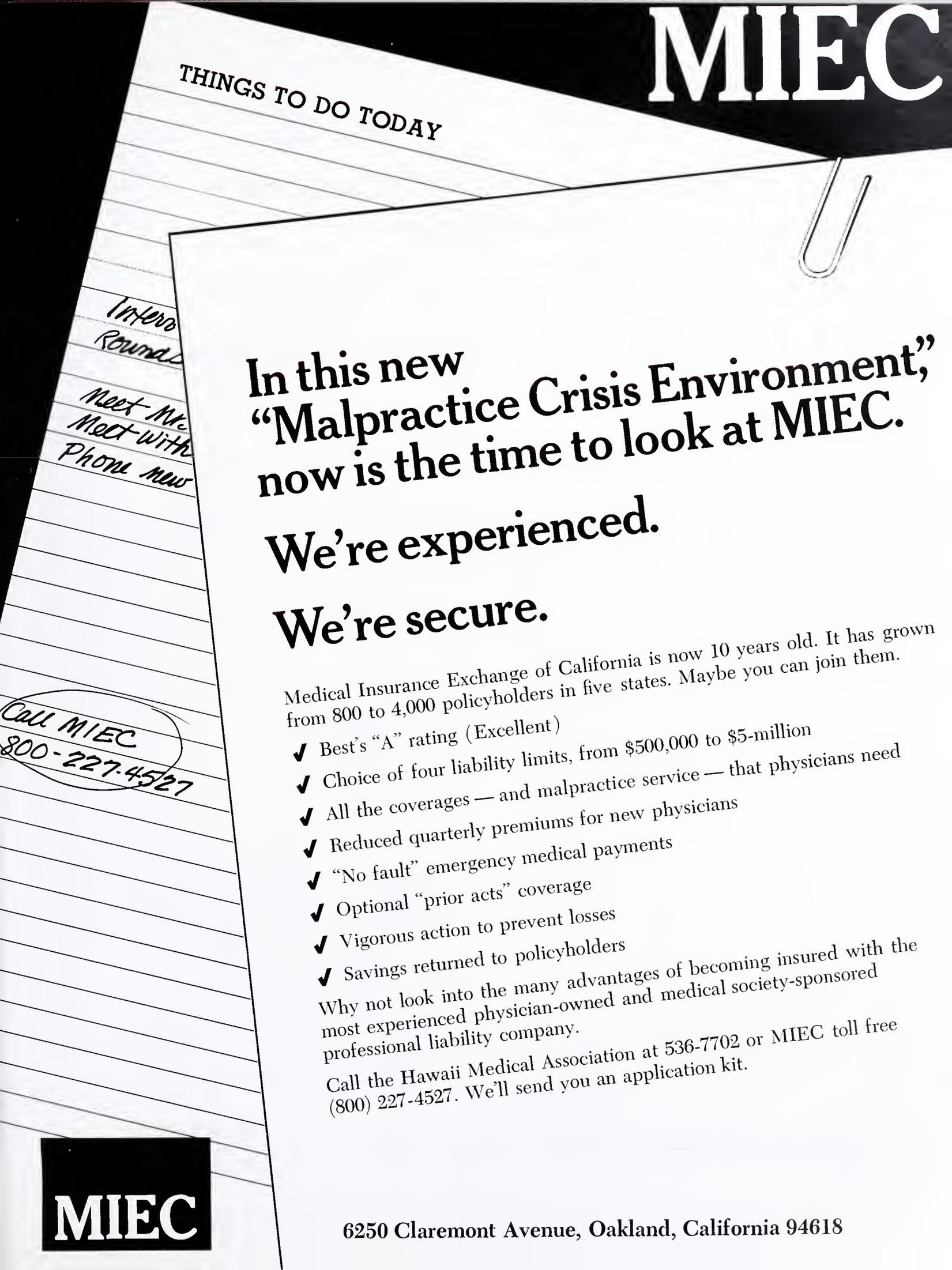
TABLE 3.
Monitor Experience by Diagnosis*

	Average length of use (months)	Reported events at home**	Average month of events at home**
All patients (N = 284)	5.60 (range 0-29)	143 (50.4%)	3.42 (range 1-27)
Prematures (N = 132)	4.93 (range 0-20)	69 (52.3%)	2.92 (range 1-16)
"Near Miss" (N = 84)	5.77 (range 1-29)	42 (50%)	3.86 (range 1-27)
Subsequent Siblings (N = 30)	8.43 (range 1-23)	12 (40%)	4.5 (range 1-9)

* Includes all patients who used the monitor at least one week. Two patients had not completed monitoring by September 1985. Contact was lost with one patient.
** For patients reporting such events

NOTES

1. A review of Sudden Infant Death Syndrome, the apnea hypothesis of SIDS, and problems associated with this hypothesis can be found in N. Valdes-Dapena, "Sudden Infant Death Syndrome: A Review of the Medical Literature 1974-1979" *Pediatrics:* 66(4):597, October 1980.
2. Such concerns were expressed, for example, in N. Nelson, "Commentary: But Who Shall Monitor the Monitor," *Pediatrics:* 61:663, 1978.
3. Valdes-Dapena (p. 603) recounted a report by Steinschneider in which parental reports were compared with respiratory tracings. Many of the incidents reported by parents as apnea were, in fact, found to be shallow breathing. In our experience, however, many parents appear to be reliable reporters of their children's apnea.
4. Primarily congenital anomalies and/or problems associated with pre-term birth.
5. The National SIDS Foundation Research Board issued the following *Statement on Terminology* in 1981: "We are concerned about increasing usage of the terms near-miss for 'SIDS' and 'aborted SIDS' which tend to create confusion about the relationship between apnea and the sudden infant death syndrome . . . The role of apnea in the causation of these inexpicable [SIDS] deaths is currently the subject of intensive scientific investigation — and not yet fully clarified. Some infants who die suddenly and inexplicably may well represent instances of death due directly to episodes of not breathing. However, it is probable that there remain other as yet unidentified or unproven causes." In our experience, the term "near miss" does describe the emotional impact on the family. Its pseudo-scientific connotations that the episode, if not interrupted, would have proceeded to a death from SIDS are unfortunate.
6. J. McBride, "Infantile Apnea," *Pediatrics in Review:* 5(9):275, March 1984.
7. See A. Spitzer and W. Fox, "Infant Apnea: An Approach to Management" *Clinical Pediatrics:* 23(7):374, July 1964.
8. For example, Guntheroth W *Crib Death: The Sudden Infant Death Syndrome:* Mt. Kisco, NY, Futura Publishing Co., 1982.
9. See McBride, "Infantile Apnea," and also Southall DP, et al: "Prolonged Apnea and Cardiac Arrhythmias in Infants Discharged from Neonatao Intensive Care Units: Failure to Predict an Increased Risk for Sudden Infant Death Syndrome" *Pediatrics:* 70(6):844, December 1982.
10. McBride.
11. Seto D: "The Epidemiology of Sudden Infant Death Syndrome in Hawaii," State of Hawaii Department of Health, *Research & Statistics Report #50,* October 1984.
12. Black L, et al: "Impact of the Apnea Monitor on Family Life" *Pediatrics:* 62(5):681, November 1978.
13. Statistics for the State of Hawaii are from the State of Hawaii Department of Health, *Statistical Supplement 1983,* Honolulu, Hawaii, DOH, 1984.



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The Syndrome of Immediate Reactivities (Contact Urticaria Syndrome) An Historical Study from a Dermatology Practice I. Age, Sex, Race, and Putative Substances

David J. Elpern, MD*

Immediate reactivities to numerous substances play a significant role in the generation of disease; however, no studies have been done to quantify how common they are. In order to estimate the incidence of immediate reactivities in a dermatological practice, 1,020 consecutive patients were questioned. Age, sex, race, history of immediate reactivity, putative substances, personal and family history of atopy, and history of drug reaction (for the last 300 patients only) were recorded.

Part I presents data on age, sex, race, and putative substances. Of the population studied, 26% were aware of substances that elicited immediate symptoms. These symptoms included pruritus, dermatitis, localized and generalized urticaria, bronchial asthma, orolarygeal edema, rhinoconjunctivitis, gastrointestinal symptoms, headache, and anaphylactic reactions. One hundred and sixty-four substances were implicated by the 261 positive responders. The data presented indicates that the Syndrome of Immediate Reactivities (SIR) is common and deserves the attention of physicians in all clinical disciplines.

Contact urticaria (CU) is the term that refers to the wheal-and-flare response elicited within a few minutes to one hour after contact of the skin or mucous membrances with certain substances. It has been a recognized process for many years. In 1975, the Contact Urticaria Syndrome (CUS) was defined.[1] In addition to urticaria this entity includes the rapid generation of pruritus, dermatitis, orolaryngeal edema, bronchial asthma, rhinoconjunctivitis, headache, gastrointestinal symptoms and anaphylaxis. The name CUS evolved from CU; however, the concept of what CUS is has been broadened considerably and the nosology is confusing and restrictive.

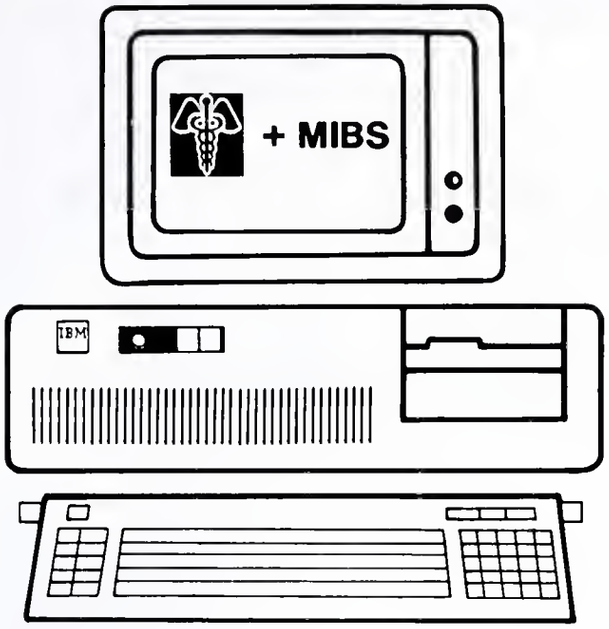
I feel that varied immediate responses to a host of substances play a significant role in the generation of disease entities commonly seen by dermatologists, allergists and other physicians. For this reason, an inclusive eponym is needed to delineate this entity. Until a better term is

TABLE 1.
Population of Kauai U.S. Census of 1980

Racial Group	Number	% of Total
Caucasian	11,147	29
Filipino	10.325	26
Japanese	9,775	25
Hawaiian and part-Hawaiian	5,704	15
Other	2,186	5
Total	39,137	

*Kauai Medical Group, Assistant Clinical Professor, John A. Burns School of Medicine, 3420-B Kuhio Hwy. Lihue 96766

Accepted for publication June 1985



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TABLE 2.
Age Distribution of 1,010 SIR Patients

Age	Number	% (+) for SIR
0- 9	76	14
10-19	109	28
20-29	252	27
30-39	221	34
40-49	88	34
50-59	114	24
60-69	80	25
70-79	54	26
80-89	14	7
90 and over	2	0

TABLE 3.
Sex Distribution of 1,011 SIR Patients

	Number	% (+) SIR
Male	406	21
Female	605	29

TABLE 4.
Race Distribution of 974 SIR Patients

Race	Number	% (+) SIR
Caucasian	447	25
Filipino	178	26
Japanese	157	29
Hawaiian/part Hawaii	84	32
Other	108	22

TABLE 6.
The 10 most commonly implicated causes of SIR

Substance	No. of times implicated
Grass, N.O.S.*	24
Cats	21
Wool	17
Shellfish, N.O.S.	16
Dust	12
Mang (Mangifera)	11
Dogs	9
Crab	8
Milk	8
Buffalo grass (Stenotaphrum)	7

*N.O.S. = Not Otherwise Specified.

found, the trinomen: Syndrome of Immediate Reactivities (SIR), is proposed as denoting the spectrum of immediate responses about which patients commonly complain. Contact urticaria is but one of these disorders.

The CUS (SIR) has been the subject of recent reviews[2, 3] and the list of causal agents is rapidly enlarging. Little is known about its epidemiology. To address this point, 1,020 patients from a private dermatological practice were questioned for historical information about SIR.

For the purpose of this study SIR was accepted as probably present if a patient experienced pruritus (P), dermatitis (D), localized urticaria (LU), generalized urticaria (GU), bronchial asthma (BA), orolaryngeal edema (OL), rhinoconjunctivitis (RC), gastrointestinal symptoms (GI), headache (HA), or an anaphylactic reaction (AR) within one hour after contact with the skin or mucous membranes with a suspected substance.

Methods

The practice surveyed is on Kauai, the most westerly of the major Hawaiian islands. The population is composed of 4 major racial groups.[4] (See Table 1.) Between 5% and 10% of new patients are tourists (mostly Caucasians).

Patients were brought into the study sequentially as they came in over a four-month period (September through December 1982). Age, sex, race, history of SIR, suspected etiological substances, personal and family history of atophy (asthma, allergic rhinitis, and atopic skin disease), and history of drug reaction (for the last 300 patients only) were recorded on all study entrants. (Definitions used for inclusion of the atopic disorders and drug reactions are in Part II, to follow this paper.[5]

Results

Of the 1,020 patients who were questioned, we obtained 1,011 usable forms. Patients (mainly Filipino immigrants) who spoke no English and for whom adequate translators could not be obtained comprised the bulk of inadequate forms.

Of 1,000 consecutive dermatology patients, 261 (26%) gave a history of SIR. In most cases this information was elicited only because this study was being conducted.

The age distribution of SIR was relatively constant from the second through the eighth decades, with lower percentages for the first and ninth decades. (See Table 2.)

Of those who had a history of immediate reactivities, 21% were males and 29% female. (See Table 3.)

Table 4 shows the racial distribution of the surveyed patients and the percentage of positive responders. The percentage positive for the four major groups is

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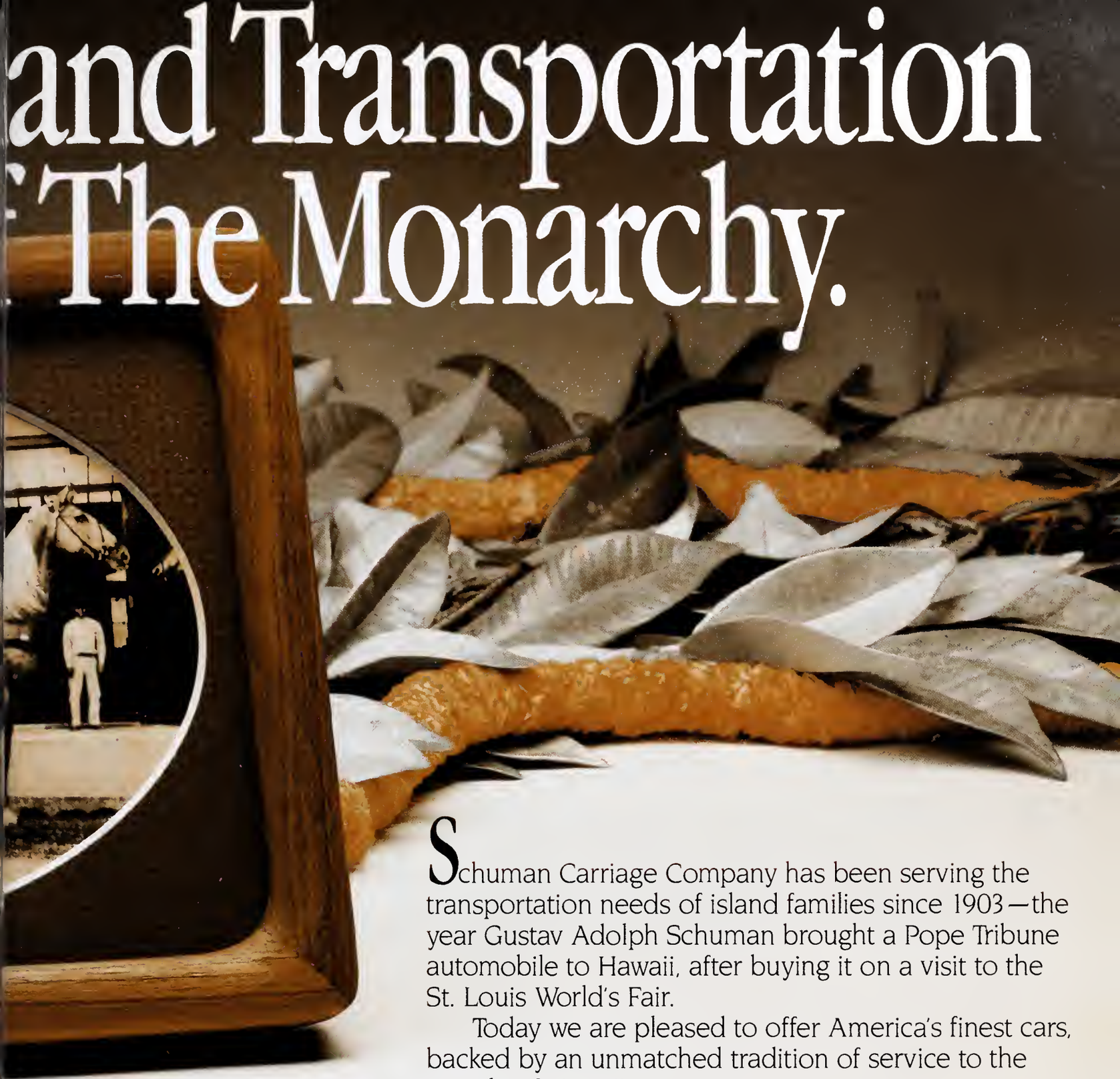
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similar.

As seen in Table 5, 164 separate substances were implicated by the 261 positive responders. Of these substances, 40 were non-edible plants; 42 were fruits, vegetables or nuts; 20 were foods of animal origin; 14 were animals or animal products; and 48 belonged to the miscellaneous category. Many have been previously reported,[2, 3] while a few seem unique. The lack of provocative testing in this study makes acceptance of these as case reports doubtful.

Discussion

Twenty-six percent of 1,011 consecutive dermatology patients gave a history of SIR when specifically questioned. Patients with cutaneous symptomatology may be preselected for such reactivities and do not represent the general population. It would be interesting to separate patients with dermatitis from those with non-inflammatory skin disease and see if the former is the group with the major share of immediate symptoms. Allergy, respiratory disease, and possible gastroenterology practices might also be expected to see significant numbers of patients with SIR. Recent work on patients with unexplained nausea, vomiting, and diarrhea has shown that immediate reaction to certain food can be an initiating factor.[6]

The incidence of SIR is relatively the same for most age groups, the exceptions being at the extremes of the spectrum where reliable historical information was difficult to obtain. The young may not have had time to be exposed to those antigens that would cause problems for them, while some of the older people may have lost some reactivity due to acquired relative immune deficiency. IgE levels in the elderly are significantly lower than in younger individuals — this may be related to the lowered incidence of SIR. Similarily, IgE is low in infancy, leveling off at age four to 12.[7]

The slight preponderance of females in the study population is probably not significant. However, the higher percentage of SIR in females as compared to males is probably significant. The reasons for this can be speculated upon. Women, because of the nature of their work, may suffer more hand dermatitis than men, and a breached barrier predisposes an individual to experiencing immediate reactivities. In addition, there may be immunological explanations for the higher incidence of SIR in women. The scope of this question lies outside of the purview of this paper.

Race did not seem to predispose any group toward immediate reactivities. The disproportionate number of Caucasians in the study population was unexpected. Part of the explanation for this may be the inclusion of tourists, as virtually all of these are Caucasians. On the basis of past experience, I would have expected a higher percentage of Filipino patients to

TABLE 5.
Substances Implicated by 261 Positive Respondents

Common Name	Scientific Name	Type of Reaction	No. with History
FOODS: VEGETABLE AND FRUIT continued			
Soy Sauce		P, D, LU	4
Teriyaki Sauce (Contains Soy Sauce)		LU	1
Taro	Colocasia	D, LU, OL	5
Tomato	Lycopersicon	P, D, GI	3
Vegetables, N.O.S.		P	1
Curry		AR	1
Comfrey Leaf	Symphytum	D	1
Garlic	Allium	NS	1
Mustard (Powdered)	Brassica	AR	1
Spices, Chinese, N.O.S.		NS	1
Wheat	Triticum	D, GI	2
Yeast		GI	1
Rye	Secale	NS	1
Rum Extract	Saccharum	D, LU	1
Scotch	Hordeum (?)	D, LU	1
Sake	Oryza	BA	1
Wine		BA, HA	3
Alcohol, N.O.S.		RC	1
FOOD: ANIMAL			
Beef		LU	1
Milk		D, LU, GI	8
Pork		D	3
Cheese		GI	1
Chicken		P, LU, GI	4
Egg		LU	2
Egg White		OL, BA	1
Honey		P	1
Fish, N.O.S.		P, LU, OL, RC, GI	6
Aku		NS	1
Bass		OL	1
Cod		OL	1
Shellfish, N.O.S.		P, D, LU, GU, OL	16
Crab		P, D, LU, OL, BA	8
Lobster		LU, OL, GI	3
Octopus		GU	1
Scallops		GI	1
Shrimp		D, LU, GI	6
FOOD, MISC.			
Pepsi cola		P, D	1
Seven-Up		NS	1
ANIMALS AND ANIMAL PRODUCTS			
Bee Stings		LU, GU	3
Hornet Stings		NS	1
Insect Bites		NS	1
Cockroaches		P, LU	1
Cats		P, D, LU, RC	21
Dogs		P, D, RC	9
Fish Bait		D	1
Feathers		NS	1
Hair, Human		D, LU	1
Horses		D, LU, OL	2
Rabbits		P, RC	1
Sweat		P, D, LU	5
Semen		P, burning	2
Wool		P, D, RC	17
MISCELLANEOUS			
Dust		RC	12
"Red Dust" (Peculiar to Kauai)		P	1
Nickel		D	1

TABLE 5.
Substances Implicated by 261 Positive Respondents

Common Name	Scientific Name	Type of Reaction	No. with History
PLANTS			
Bamboo	Bambusa	P, LU	1
Breadfruit Leaf	Treculia	P, D	1
Cactus, N.O.S.*		P, D, LU	2
Century Plant	Agave	P	1
Crown Flower	Calotropis	P, D	2
Croton	Codiaeum	RC	1
Dieffenbachia	Dieffenbachia	P	1
Easter Lily	Lilium	Ha	1
Elm	Ulmus	RC	1
Euphorbia, N.O.S.	Euphorbia	P, D	1
Flowers, N.O.S.		NS	1
Grasses, N.O.S.		P, D, LU, GU, RC	24
Buffalo Grass	Stenotaphrum	P, D	7
Honohono	Commelina	D, RC	1
Ironwood	Mesua ferrea	NS	1
Juniper	Juniperus	P, D	2
Lantana	Lantana	D	1
Mildew		RC	3
Mold		RC	4
Philodendron	Philodendron	P, D	1
Plants, N.O.S.		P, D, LU	4
Frangipani	Plumeria	P, D	2
Pollen		NS	1
"Rhus"		P, D	1
Poison Ivy	Toxicodendron	D	1
Poison Ivy	Toxicodendron	NS	1
Pumpkin Stem	Cucurbita	P	1
Poultry Feed		P, D	1
Pig Feed		D	1
Radish Leaf	Raphanus	NS	1
Rubber	Hevea	P, LU	1
Strawberry Leaf	Fragaria	D	1
Sugarcane	Saccharum	LU	1
Ti	Cordyline	LU	1
Tobacco	Nicotania	BA	1
Trees, N.O.S.		RC	1
Vines		P, RC	1
Wedelia	Wedelia	P	3
Wandering Jew	Commelina	P	1
Weeds		P, D, LU, BA	6
FOODS: VEGETABLE AND FRUIT			
Acerola	Malpighia	P, D	1
Almonda	Amygdalus	D, LU	1
Apple	Malus	P, LU	1
Apricots (Sulfated)	Prunus	OL	1
Avocado	Persea	OL	1
Banana	Musa	P	1
Citrus, N.O.S.		GI	1
"Fruit Sap"		P, D	1
Fig	Ficus	NS	1
Grape	Vitis	GU	1
Hazel Nut	Corylus	D, LU	1
Kiwi	Actinidia	GU	1
Mango	Mangifera	P, D, LU, RC	11
Melons, N.O.S.	Citrullus (?)	P, OL	1
Papaya	Carica	P	4
Peach	Prunus	P, LU	1
Peanut	Arachis	LU, GU, BA, AR	2
Pineapple	Ananas	D	1
Broccoli	Brassica	LU	1
Celery	Apium	P	1
Chocolate	Theobroma	P, LU, GU, OL	4
Eggplant	Solanum	P, OL	2
Onion, Green	Allium	P	1
Pepper, Green	Piper	P	1
Soybeans	Glycine	NS	1

give a history of SIR than the other racial groups. However, since a significant number of Filipinos speak English as a second language, the data may not reflect true incidence.

The 10 most commonly implicated substances, with the exception of mango, could all have been predicted prior to this study. (See Table 6.) In all, 13 patients with histories of immediate reactions to *Anacardiaceae* plants were encountered. These were carefully questioned to exclude delayed hypersensitivity. The 11 mango-sensitive patients were all born in Hawaii. Hawaii-born persons only rarely develop classical contact dermatitis from mango.* It seems that immediate reactions to *Mangifera,* though only rarely reported,[8, 9] may be more prevalent than apparent.

Two patients were aware of anaphylactic reactions for which they had to receive parenteral medications. One person reacted to peanuts and peanut oil, and the other to curry and powdered mustard. There were other patients with serious reactions such as laryngeal edema and bronchial asthma. In most cases this information would not have been easily elicited in the course of a routine office visit. Questioning patients for a history of SIR is clearly of more than intellectual interest for the physician.

There are deficiencies in the historical study format. It is difficult to assess whether persons relating a history of immediate symptoms were describing subjective symptoms (i.e. burning and stinging) without vascular change, or whether they were describing true disease generation. This point could have been addressed by challenging positive respondents to the incriminated substances. However, this was not feasible because of the time constraints imposed by an active clinical practice. It is hoped that others will be stimulated to test this hypothesis more rigorously.

In summary, what emerges is the picture of a common syndrome characterised by immediate reactions in a number of target organs, the most common being the skin, and the respiratory and gastrointestinal tracts. Urticaria is only one of the reaction patterns seen. SIR is actually a group of diseases with diverse etiologies. Some are clearly immunologic (IgE mediated), some pharmacologic, and some of uncertain mechanism. Nosologic confusion generated by the confining term CUS has induced us to propose SIR as a surrogate. Part II[5] will present data on the relationship of atopy and a history of drug reactions to SIR. Part III will discuss SIR as it relates to the practice of dermatology and the other medical specialties.[10]

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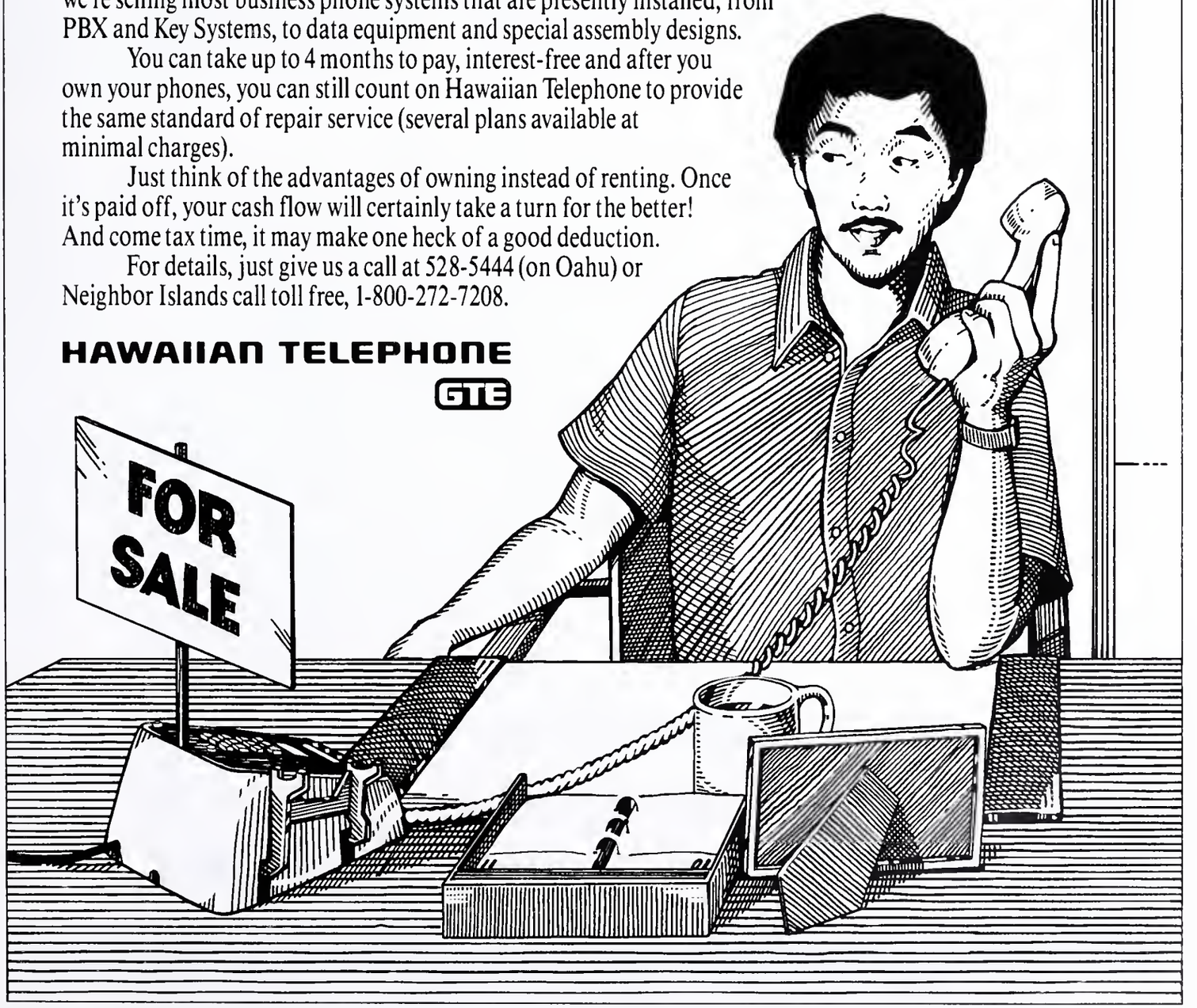
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*personal observation of the author

TABLE 5.
Substances Implicated by 261 Positive Respondents

Common Name	Scientific Name	Type of Reaction	No. with History
MISCELLANEOUS continued			
Coins		D	1
Water, N.O.S.		P. LU	4
Salt water		P, D, LU	7
Fertilizer		D	1
Salt		P	1
"Aerosols"		NS	1
Aftershave Lotions		LU	1
Cosmetics, N.O.S.		D, LU	1
Perfume		BA, HA	2
Toothpaste		LU	1
Visine		RC	1
Bleach		NS	1
Chalk		P, D	1
Cleanser, N.O.S.		P, D	1
Detergent		D, RC	7
Bubble Bath		P, D	1
Soap		P, LU	6
Newsprint		P, D	1
Off-Spray	Dimethyltoluamide	RC	1
Paint		LU, OL	1
Paper		LU	1
Fabric, N.O.S.		D	1
Fiberglass		D	1
Synthetic Fiber		D	3
Polyester		P, LU	3
Vinyl		LU	1
Air Conditioning		RC	3
Smoke		RC	2
Sunshine		Sneezing-11	1
Rubbing		LU	1
Physical pressure		P, LU	1
Isoprophyl alcohol		P, D	1
Ammonia		D	1
Carpet		P	1
Cigarettes		HA	1
Bleach	Hypochlorite	P	1
Oven cleaner		D	1
Fabric Softener		P	1
Dye, leather		P, D	1
Metals, N.O.S.		D	1
Money, paper		RC	1
Silver		D	1
Surgical Scrub	Hexachlorophene	D, LU	1
Septisol		P	1
Suntan Lotion (? ingredient		D	1

*N.O.S. = Not Otherwise Specified.



Over the Editor's Desk

A report in the May American Journal of Diseases of Children suggests that daily drinking of apple juice may be a cause of chronic nonspecific diarrhea (CNSD). "We have recently encountered a subset of children with CNSD in whom non-excessive apple juice intake seemed to cause their diarrhea," say Jeffrey S. Hymas, MD, and Alan M. Leichtner, MD, from the University of Connecticut Health Center in Farmington. Five of the children showed significant carbohydrate malabsorption after drinking 240 ml (about one 8 oz. glass) of apple juice. "Withdrawal of apple juice from the diets of these subjects was curative in all cases," they say. Before embarking on a time-consuming evaluation for CNSD in otherwise healthy children, they recommend a brief restriction of apple juice intake.

* * *

Lyme Disease Poses Summer Outdoor Hazard — Add Lyme disease to the list of potential summer hazards. The recently identified illness is caused by a bacterial organism commonly carried by a deer tick, an insect active in the forests and brush areas of the Northeast, the Midwest and California during the summer months. Lyme disease was first identified in 1975 by Drs. Steere and Malawista in residents of Lyme, Connecticut. By 1977, the investigators were convinced that the Ixodes dammini deer tick was the carrier of the disorder. In the summer of 1982, researchers at the Rocky Mountain Laboratory in Hamilton, Mont., reported the isolation of a newly recognized spirochete, a type of bacteria, in the tick; the Yale investigators later located this organism in patients with Lyme disease.

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Funding for FMG programs is jeopardized if Congress goes through with proposed plans to cut Medicare funds for graduate medical education. The American Hospital Association will call upon Congress to first limit funds for foreign medical graduates (FMGs). Similar action also has been taken by the American Medical Association, the Association of American Medical Colleges, and other medical groups. FMGs accounted for 18 percent of all medical residents on duty in U.S. hospitals in 1984; more than half of these FMGs were American citizens who attended medical schools abroad. However, a disproportionate number of FMGs are in residency programs in New Jersey, New York and Pennsylvania. Nearly half of the 13,337 FMGs on duty in 1984 were in hospitals in these three states, with nearly one-third in New York alone. The AHA plan recommending that FMG funding be phased out calls for special consideration for hospitals that depend heavily on FMG staffing.



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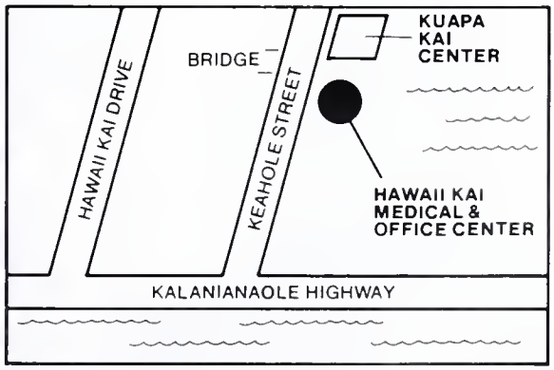
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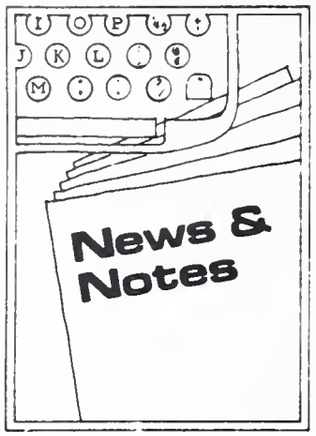
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Henry Yokoyama, MD

Life In These Parts . . .

Back in February, we found a $5 fundraiser ticket titled "An Evening with Senator Pat Saiki" for March 29 at the Queen Kapiolani Hotel.

Well, Pat has been a good friend, and since we had enjoyed her previous fundraisers, we perfunctorily wrote out a check, wondering why she had sent only one ticket instead of the usual two. Then we received a mysterious letter dated April 10 from Pat: "Dear Henry, you are the very first contributor to the "Good Friends of Pat Saiki," 1985 version. I thank you so much for your generosity and continued trust in me" . . . etc., etc. "With warmest regards, Patricia Saiki, Chairman, Republican Party of Hawaii." We felt elated on being the "very first contributors," but when we reexamined the ticket, it distinctly said 5:30 to 8 p.m., March 29, 1982

"Perhaps the most unfortunate allergy in town has befallen pediatrician **Bill Moore** . . . He's allergic to baby powder. . . ." (From Dave Donnelly's Hawaii)

We were intrigued by psychiatrist **Douglas Cooper**'s modulated description in court as "fairly bizarre" and "highly irrational" of the behavior of a 24-year-old man who last year fatally slammed a baseball bat into his mother's head and then sat and watched the TV show Love Boat. . . .

Despite opposition from the Hospital Association of Hawaii and the Hawaii Medical Association, the House Health Committee has approved a bill to allow patients in nursing homes and rehab centers to have visits by pets. The bill originally proposed allowing pets to visit acute hospital patients, as well. Heaven forbid!

Alas! Sushi, sashimi and lomi lomi salmon may harbor an Anisakis parasite which burrows into gastric and intestinal lining, according to Robert Fontaine of the Centers for Disease Control. Robert Desowitz of the UH School of Tropical Medicine reassures us that most of the worms found in Hawaii come from imported fish. People here use local fresh fish for sushi so the worm load from fish is very light. Richard Raybourne of the FDA Division of Microbiology in Washington, D.C., who worked at the UH School of Tropical Medicine for three years, says he had found the Anisakis parasite in imported frozen fish, as well as local opakapaka, red snapper and rock fish. Sashimi fanciers can freeze fish for 24 hours at minus 20 degrees centigrade in order to kill the parasites. . . .

Smoking Ban . . . The Honolulu City Council voted 7-2 to ban smoking in public places other than restaurants, bars and small businesses. The penalty for violators is a $5 fine following a police citation.

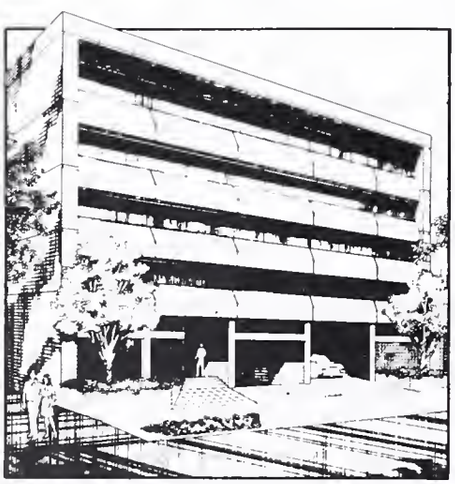
Bob Overlock and the crew of the Kauai Underwater Association (KUA) saved Bob Hamilton, bends victim, from permanent residuals as a result of their quick action and then use of the recompression chamber at Kauai Veterans Memorial Hospital.

Earl Motooka, state Medicaid administrator, announced in June that nursing homes and hospitals providing long-term care will have a new Medicaid schedule, retroactive to February. . . . Motooka says that the state is switching from "reasonable costs" payment to a predetermined formula payment. The state is trying to control costs in the $200 million Medicaid program.

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The Scarlet Sake Drinker . . . Flushing or a hot flash is a common phenomenon among Japanese drinkers. The Japanese Ministry of Health in Tokyo and the U.S. Department of Health will sponsor a joint $200,000 U.S.-Japanese survey to determine if cultural differences in Japan, Honolulu and on the Mainland cause differences in flushing. In Japan, 500 Japanese have already been surveyed. And 500 Japanese-Americans in San Jose, California were surveyed in April. . . . Now it's our turn.

George Bolian, QMC president, announced that Queen's is now a shareholder in Voluntary Hospitals of America, the nation's leading not-for-profit multihospital system. Membership will allow Queen's to benefit from such joint programs as capital financing, management services, volume purchasing and a communications network. The multihospital system, founded in 1977, now has 75 shareholder hospitals and has a network of more than 400 hospital organizations in 41 states. . . . (George is now a former president*/ed.)*

Richard Mamiya, president of Hawaii Heart Association, says: "Like anything in life, moderation is the key. A person needs to live a meaningful life, not become a slave to diet, exercise and medication. . . . You must reduce risk factors and learn to control them, but you shouldn't become too fanatical or stressed about it." Dick has heart. . . .

Jeffry Smith, Kauai district health officer, reports that a 21-year-old West Kauai woman who survived symptoms of tetanus was the first case in Hawaii in 10 years and the first on Kauai in 18 years. He feels that the woman was saved because she had partial immunity from a tetanus shot she received four years ago.

The governor signed into law a bill allowing graduates of foreign medical schools who hold the American Medical Association's Fifth Pathway Program certificate to be eligible for Hawaii's medical licensing examination. . . . Whatever this "Fifth Pathway" is. . . .

KMC is one of two centers in the country to receive federal grants for large-scale studies of osteoporosis. The Kuakini team, with **Richard Wasnich** as principal investigator and **John Vogel,** who created the screening process when he was with NASA, has followed more than 3,000 people for five years. . . .

Fred Gilbert Jr., from the Pacific Health Research Institute, is the first physician from Hawaii to be elected to the National Academies of Practice as a Distinguished Practitioner. The institute was established in 1960 as part of Straub Clinic and became an independent nonprofit organization in 1970. A staff of five puts together grant proposals; it coordinates and monitors about 30 research projects in hospitals and clinics in the state. . . . Gilbert believes that a physician has to be an investigator if he is

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going to do well by his patients: "A first-class physician is involved in a mini-research project with every patient that comes into his office."

The Early Intervention Program, Family Stress Center, began a two-year project on July 1 in Waikiki, Palolo and some Ewa-Waipahu neighborhoods to show that child abuse and neglect can be wiped out or significantly reduced. The program will concentrate on infants under age one the first year and children under two the second year. Reports of child abuse and neglect in Hawaii have increased from 1,000 in 1974 to more than 4,000 last year. The center expects to evaluate from 800 to 1,000 families and to provide services to 125 to 150 families each year.

Phil McNamee, one of the five OB-Gyn men with the newly opened Pacific In-Vitro Fertilization Institute, reported in May that three patients have been confirmed as pregnant and five more are probables. The technique was tried on 16 women so the eight represent a 50% success rate. . . . Others on the Honolulu team are **Gary Morton, Francis Tereda, Thomas Kosasa,** and **Benton Chun**. . . . A Kauai team headed by **Frederick Sengstacke II** started the in-vitro fertilization procedures early in 1983, but to date have no confirmed pregnancies among their eight women patients.

AIDS . . . **David McEwan,** president of Life Foundation, a non-profit education, prevention and support group says 45 cases have been reported to the State Health Department (17 of these people have died) and 10 more have been diagnosed but not reported. . . . The Blood Bank of Hawaii announced in May that all blood in the bank and in civilian hospitals has been tested and found negative for the HTLV-III virus.

NIH researchers have now discovered the HTLV-III virus in the teardrops of AIDS patients. Scientists at the National Eye Institute and NIH's Clinical Center say thus far there is no evidence of transmission through direct contact to eye doctors and through eye instruments, but repeated close contact with tears of AIDS patients theoretically could cause transmission. Robert Gallo of NCI says: "It indicates that the virus is present increasingly in more body fluids than we or anyone originally thought. . . . It has been found not only in blood cells and lymph nodes, but also in blood plasma, in semen, saliva and now tears."

Physicians Speak Up

Over the years, we have come to admire the human dynamo of a pathologist, **Jim Navin,** who wears many hats as Straub pathologist, Accupath consultant, ER physician . . . And now as new Medical Director of Laboratories at KWCMC, as well. He sums up the problems the labs have encountered with the DRGs and other government controls:

"Laboratories and hospitals have borne the brunt of the cost-saving activities of HCFA and Congress. The laboratory is in transition from a major profit center to a cost center. The impact of these changes has been dramatic. The changes have ranged from restricting testing and reducing service to complete closure of hospital labs with centralization of services in an area laboratory. On the Mainland, hospitals have merged their laboratories; they have formed joint ventures with commercial laboratories; and they have themselves gone into the for-profit laboratory business. Some could not meet the new cost constraints and have gone out of business.

"Our job is to work together to make the laboratory a profitable cost-efficient operation while maintaining high-quality service and results. Cooperation between the various hospital services, the lab and the medical staff will allow us to achieve these goals."

Professional Moves

In July, dermatologist **Ned Stoughton** opened at 302 California Ave., Suite 102 (The ad says Tagalog is spoken by an office staffer). . . . OB-Gyn man **Ronald Ayabe** opened at Aiea Medical Building, Suite 502, and internist **Sharon Kuroiwa Lawler** opened her office with dentist Keith Kuroiwa at 1481 S. King St., Suite 200. On Maui, pediatrician **Frank Baum** joined the Maui Clinic at 53 Puunene Ave., Kahului.

Someone Goofed!

KMC Bulletin Board: Tuesday, Aug. 21. . . . Medical M&M Speaker: Orville Gene Kelterman, University of California, San Diego Medical Center. . . . "*Eyelet* Cell Implant."

Notice from Health & Community Services Council of Hawaii: "Public forum on costs of care." "Warning: The Surgeon General has not determined that the high cost of medical care is harmful to your health."

Overcast rainy Thursday noon . . . en route to Mid Pac CC . . . passed Pali tunnel. . . . Before first turn, construction road sign says: "Right lane closed 1,500 yards." We dutifully shift to the left lane. . . . Just past the second turn, a second sign hits us: "Left lane closed 1,000 yards. . . ." We slow down, puzzled. . . . Fortunately, the third sign says, "Right lane closed 500 yards" The line of cars again snakes to the left . . . and picks up speed.

Elected, Honored and Appointed

OB-Gyn person **Kathleen O'Connor** with the Hilo Medical Group was selected as a judge for Hilo's Lehua Jaycees 34th Annual Miss Aloha Hawaii Scholarship Pageant held in March. . . .

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PACIFIC BUSINESS NEWS

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Carlo Brizzolara of Kailua-Kona completed his requirements for active membership in the AAFP. . . . **Calvin Wong** was elected to fellowship in the American College of Cardiology. . . . Hawaii Dermatological Society elected **Roman Glamb** as president and **Jay Grekin** as vice president. . . . Hawaii Society of Pathologists elected **John Hardman** as president, **Charles Odom** as president-elect, and **David Horio** as secretary-treasurer. . . . Urologist **James Stewart** will serve as chief-of-staff at Queen's Medical Center for 1985-86. . . . **Charles Morin** of Kapaau on the Big Island received the Excellence in Teaching Award from the Family Practice and Community Health Department of the John A. Burns School of Medicine for the academic year 1984-85. . . . **Arnulfo Diaz** was re-elected president of the medical staff at Wilcox Memorial. **Thomas Harrison** was elected vice president and **Lee Evslin** was chosen secretary-treasurer. Outgoing are **Terence Carolan**, vice president, and **Neal Sutherland**, secretary-treasurer. . . . **Nathan Wong**, Honolulu family practitioner, was on the Hokulea's 1980 Tahiti-Honolulu leg and will sail again on one of the legs of the two-year voyage of ancestral discovery. During the 1980 Honolulu-Tahiti leg, Kauai OB-Gyn member **Patrick Aiu** had his share of sick crewmen when the canoe left Hilo in a storm, but Wong's return trip was quite uneventful medically.

Oncology Conference (Two Unusual Cases of Stage I Esophageal CA)

Pioneer endoscopist **Takakazu Fukumura** presented two cases of Stage I esophageal CA. The first was a 40-year-old male (three-pack smoker and two-sixpack drinker) with a long history of hepatomegaly. Takakazu scoped him because of the patient's vague GI symptoms and noted an area of excoriation approximately 6 cm above the cardia. He had seen similar excoriations before, but something made him take a single biopsy of the area and was he surprised when the result came back as squamous CA! . . . Surgeon **S.K. Liao** left 50% of the esophagus in his resection. Moderator **Glenn Kokame** asked about the chances of recurrence. Pathologist **Grant Stemmermann** remarked caustically, "Excellent because of his heavy consumption of alcohol and cigarettes." Kokame: "How about a follow-up endoscopy every six months?" Takakazu would have been content with scoping every two years, but Liao was adamant: "I would scope every six months for the first three to four years." Oncologist **Kevin Loh** waxed philosophical: "The best advice is for him to stop drinking and smoking." Takakazu looked skeptical.

The second case was a 79-year-old woman with chest pain who had seen

several cardiologists who repeated EKGs and who prescribed nitroglycerine and beta-blockers without improvement. The last cardiologist prescribed calcium channel blockers with slight improvement and did an UGI series which was read as negative.

Takakazu repeated the UGI 1½ months later and it showed interesting pathology. Before surgery, Takakazu* showed the films to pathologist-EM-man Hayashi, who simply glanced at the films and called it "polypoid carcinoma." Pathologist **Eugene Yanagihara** confirmed the diagnosis later, after surgery, and reported only 53 cases in U.S. literature. Hayashi showed EM slides of the lesion.

Kokame asked, "How did you make the diagnosis from the film?" Modest Hayashi characteristically rubbed his scalp and replied: "Just lucky, I guess." Loh asked, "What's the survival rate?" Hayashi replied, "Forty nine percent five-year-survival in the English literature." (EM = Electron microscopist)

Sportsmen

The first Annual Aloha Run was organized by Jack Scaff and Carole Kai (of bed race fame). . . . Approximately 10,000 runners, wheelchair athletes, joggers and walkers participated in the 7.5-mile race, and our 36-year-old anesthesiologist, **Duncan Macdonald**, won in 38 minutes, 11 seconds. He apologized for not making it a better race: "The way to make a race out of it is to go out too fast and die. I did that, but fortunately, I didn't die enough. . . ."

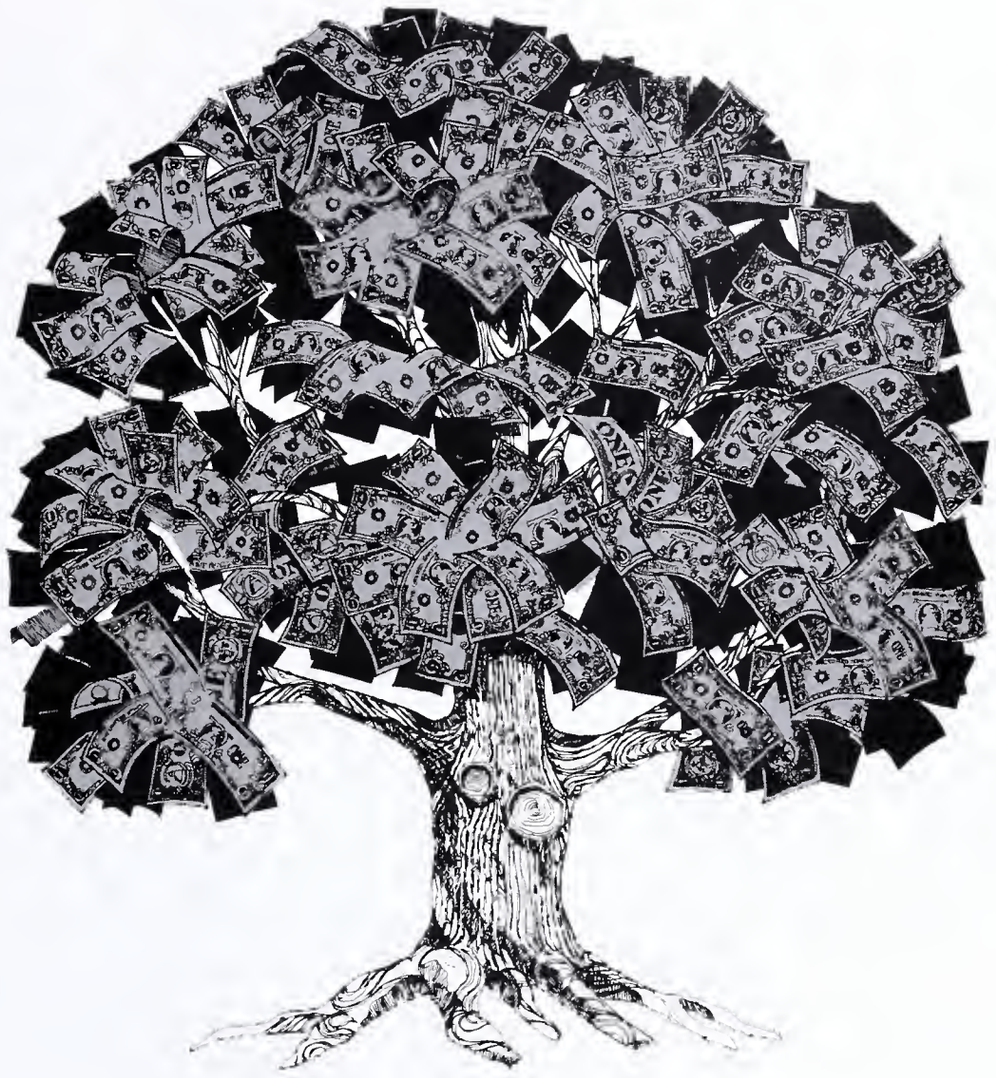
Golfers

From the March-May issue of KMC Medical Staff Newsletter, we gleaned an intriguing scientific article by neurologist **Mike Okihiro** which explains that vagaries which beset most of us when we play golf. He explains that the "yips" and "shanks" are reminiscent of the apraxic syndromes of the CNS disorders of the dominant hemisphere. . . . Our solution has been to take one or two drinks before playing. The game hasn't really improved, but it doesn't bother us as much. We herein include Mike's fascinating analysis of the game in toto:

An Apraxia of the Descending Stroke, A New Neurological Syndrome, by Michael Okihiro, MD

Peter Dobereiner, a well-known golf writer, recently put into words what I have known for many years (but have not stated for obvious reasons), that "the real game of golf is conducted within the central nervous system of the player." He was commenting on a particularly

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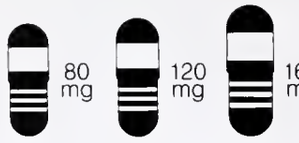
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BRIEF SUMMARY *(FOR FULL PRESCRIBING INFORMATION, SEE PACKAGE CIRCULAR.)*

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INDERAL LA Capsules (80, 120, and 160 mg) release propranolol HCl at a controlled and predictable rate. Peak blood levels following dosing with INDERAL LA occur at about 6 hours and the apparent plasma half-life is about 10 hours. When measured at steady state over a 24-hour period the areas under the propranolol plasma concentration-time curve (AUCs) for the capsules are approximately 60% to 65% of the AUCs for a comparable divided daily dose of INDERAL tablets. The lower AUCs for the capsules are due to greater hepatic metabolism of propranolol, resulting from the slower rate of absorption of propranolol. Over a twenty-four (24) hour period, blood levels are fairly constant for about twelve (12) hours then decline exponentially.

INDERAL LA should not be considered a simple mg for mg substitute for conventional propranolol and the blood levels achieved do not match (are lower than) those of two to four times daily dosing with the same dose. When changing to INDERAL LA from conventional propranolol, a possible need for retitration upwards should be considered especially to maintain effectiveness at the end of the dosing interval. In most clinical settings, however, such as hypertension or angina where there is little correlation between plasma levels and clinical effect, INDERAL LA has been therapeutically equivalent to the same mg dose of conventional INDERAL as assessed by 24-hour effects on blood pressure and on 24-hour exercise responses of heart rate, systolic pressure and rate pressure product. INDERAL LA can provide effective beta blockade for a 24-hour period.

The mechanism of the antihypertensive effect of INDERAL has not been established. Among the factors that may be involved in contributing to the antihypertensive action are (1) decreased cardiac output, (2) inhibition of renin release by the kidneys, and (3) diminution of tonic sympathetic nerve outflow from vasomotor centers in the brain. Although total peripheral resistance may increase initially, it readjusts to or below the pretreatment level with chronic use. Effects on plasma volume appear to be minor and somewhat variable. INDERAL has been shown to cause a small increase in serum potassium concentration when used in the treatment of hypertensive patients.

In angina pectoris, propranolol generally reduces the oxygen requirement of the heart at any given level of effort by blocking the catecholamine-induced increases in the heart rate, systolic blood pressure, and the velocity and extent of myocardial contraction. Propranolol may increase oxygen requirements by increasing left ventricular fiber length, end diastolic pressure and systolic ejection period. The net physiologic effect of beta-adrenergic blockade is usually advantageous and is manifested during exercise by delayed onset of pain and increased work capacity.

In dosages greater than required for beta blockade, INDERAL also exerts a quinidine-like or anesthetic-like membrane action which affects the cardiac action potential. The significance of the membrane action in the treatment of arrhythmias is uncertain.

The mechanism of the antimigraine effect of propranolol has not been established. Beta-adrenergic receptors have been demonstrated in the pial vessels of the brain.

Beta receptor blockade can be useful in conditions in which, because of pathologic or functional changes, sympathetic activity is detrimental to the patient. But there are also situations in which sympathetic stimulation is vital. For example, in patients with severely damaged hearts, adequate ventricular function is maintained by virtue of sympathetic drive which should be preserved. In the presence of AV block, greater than first degree, beta blockade may prevent the necessary facilitating effect of sympathetic activity on conduction. Beta blockade results in bronchial constriction by interfering with adrenergic bronchodilator activity which should be preserved in patients subject to bronchospasm.

Propranolol is not significantly dialyzable.

INDICATIONS AND USAGE. Hypertension: INDERAL LA is indicated in the management of hypertension; it may be used alone or used in combination with other antihypertensive agents, particularly a thiazide diuretic. INDERAL LA is not indicated in the management of hypertensive emergencies.

Angina Pectoris Due to Coronary Atherosclerosis: INDERAL LA is indicated for the long-term management of patients with angina pectoris.

Migraine: INDERAL LA is indicated for the prophylaxis of common migraine headache. The efficacy of propranolol in the treatment of a migraine attack that has started has not been established and propranolol is not indicated for such use.

Hypertrophic Subaortic Stenosis: INDERAL LA is useful in the management of hypertrophic subaortic stenosis, especially for treatment of exertional or other stress-induced angina, palpitations, and syncope. INDERAL LA also improves exercise performance. The effectiveness of propranolol hydrochloride in this disease appears to be due to a reduction of the elevated outflow pressure gradient which is exacerbated by beta-receptor stimulation. Clinical improvement may be temporary.

CONTRAINDICATIONS. INDERAL is contraindicated in 1) cardiogenic shock, 2) sinus bradycardia and greater than first degree block, 3) bronchial asthma, 4) congestive heart failure (see WARNINGS) unless the failure is secondary to a tachyarrhythmia treatable with INDERAL.

WARNINGS. CARDIAC FAILURE. Sympathetic stimulation may be a vital component supporting circulatory function in patients with congestive heart failure, and its inhibition by beta blockade may precipitate more severe failure. Although beta blockers should be avoided in overt congestive heart failure, if necessary, they can be used with close follow-up in patients with a history of failure who are well compensated and are receiving digitalis and diuretics. Beta-adrenergic blocking agents do not abolish the inotropic action of digitalis on heart muscle.

IN PATIENTS WITHOUT A HISTORY OF HEART FAILURE, continued use of beta blockers can, in some cases, lead to cardiac failure. Therefore, at the first sign or symptom of heart failure, the patient should be digitalized and/or treated with diuretics, and the response observed closely, or INDERAL should be discontinued (gradually, if possible).

IN PATIENTS WITH ANGINA PECTORIS, there have been reports of exacerbation of angina and, in some cases, myocardial infarction, following abrupt discontinuance of INDERAL therapy. Therefore, when discontinuance of INDERAL is planned the dosage should be gradually reduced over at least a few weeks, and the patient should be cautioned against interruption or cessation of therapy without the physician's advice. If INDERAL therapy is interrupted and exacerbation of angina occurs, it usually is advisable to reinstitute INDERAL therapy and take other measures appropriate for the management of unstable angina pectoris. Since coronary artery disease may be unrecognized, it may be prudent to follow the above advice in patients considered at risk of having occult atherosclerotic heart disease who are given propranolol for other indications.

Nonallergic Bronchospasm (e.g., chronic bronchitis, emphysema)— PATIENTS WITH BRONCHOSPASTIC DISEASES SHOULD IN GENERAL NOT RECEIVE BETA BLOCKERS. INDERAL should be administered with caution since it may block bronchodilation produced by endogenous and exogenous catecholamine stimulation of beta receptors.

MAJOR SURGERY: The necessity or desirability of withdrawal of beta-blocking therapy prior to major surgery is controversial. It should be noted, however, that the impaired ability of the heart to respond to reflex adrenergic stimuli may augment the risks of general anesthesia and surgical procedures.

INDERAL (propranolol HCl), like other beta blockers, is a competitive inhibitor of beta-receptor agonists and its effects can be reversed by administration of such agents, e.g., dobutamine or isoproterenol. However, such patients may be subject to protracted severe hypotension. Difficulty in starting and maintaining the heartbeat has also been reported with beta blockers.

DIABETES AND HYPOGLYCEMIA: Beta-adrenergic blockade may prevent the appearance of certain premonitory signs and symptoms (pulse rate and pressure changes) of acute hypoglycemia in labile insulin-dependent diabetes. In these patients, it may be more difficult to adjust the dosage of insulin.

THYROTOXICOSIS: Beta blockade may mask certain clinical signs of hyperthyroidism. Therefore, abrupt withdrawal of propranolol may be followed by an exacerbation of symptoms of hyperthyroidism, including thyroid storm. Propranolol does not distort thyroid function tests.

IN PATIENTS WITH WOLFF-PARKINSON-WHITE SYNDROME, several cases have been reported in which, after propranolol, the tachycardia was replaced by a severe bradycardia requiring a demand pacemaker. In one case this resulted after an initial dose of 5 mg propranolol.

PRECAUTIONS. *General:* Propranolol should be used with caution in patients with impaired hepatic or renal function. INDERAL (propranolol HCl) is not indicated for the treatment of hypertensive emergencies.

Beta adrenoreceptor blockade can cause reduction of intraocular pressure. Patients should be told that INDERAL may interfere with the glaucoma screening test. Withdrawal may lead to a return of increased intraocular pressure.

Clinical Laboratory Tests: Elevated blood urea levels in patients with severe heart disease, elevated serum transaminase, alkaline phosphatase, lactate dehydrogenase.

DRUG INTERACTIONS: Patients receiving catecholamine-depleting drugs such as reserpine should be closely observed if INDERAL is administered. The added catecholamine-blocking action may produce an excessive reduction of resting sympathetic nervous activity which may result in hypotension, marked bradycardia, vertigo, syncopal attacks, or orthostatic hypotension.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term studies in animals have been conducted to evaluate toxic effects and carcinogenic potential. In 18-month studies in both rats and mice, employing doses up to 150 mg/kg/day, there was no evidence of significant drug-induced toxicity. There were no drug-related tumorigenic effects at any of the dosage levels. Reproductive studies in animals did not show any impairment of fertility that was attributable to the drug.

Pregnancy: Pregnancy Category C. INDERAL has been shown to be embryotoxic in animal studies at doses about 10 times greater than the maximum recommended human dose. There are no adequate and well-controlled studies in pregnant women. INDERAL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: INDERAL is excreted in human milk. Caution should be exercised when INDERAL is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS. Most adverse effects have been mild and transient and have rarely required the withdrawal of therapy.

Cardiovascular: bradycardia, congestive heart failure, intensification of AV block, hypotension, paresthesia of hands, thrombocytopenic purpura, arterial insufficiency, usually of the Raynaud type.

Central Nervous System: lightheadedness; mental depression manifested by insomnia, lassitude, weakness, fatigue, reversible mental depression progressing to catatonia, visual disturbances, hallucinations, an acute reversible syndrome characterized by disorientation for time and place, short-term memory loss, emotional lability, slightly clouded sensorium, and decreased performance on neuropsychometrics.

Gastrointestinal: nausea, vomiting, epigastric distress, abdominal cramping, diarrhea, constipation, mesenteric arterial thrombosis, ischemic colitis.

Allergic: pharyngitis and agranulocytosis, erythematous rash, fever combined with aching and sore throat, laryngospasm and respiratory distress.

Respiratory: bronchospasm.

Hematologic: agranulocytosis, nonthrombocytopenic purpura, thrombocytopenic purpura.

Auto-Immune: In extremely rare instances, systemic lupus erythematosus has been reported.

Miscellaneous: alopecia, LE-like reactions, psoriasiform rashes, dry eyes, male impotence, and Peyronie's disease have been reported rarely. Oculomucocutaneous reactions involving the skin, serous membranes and conjunctivae reported for a beta blocker (practolol) have not been associated with propranolol.

DOSAGE AND ADMINISTRATION. INDERAL LA provides propranolol hydrochloride in a sustained-release capsule for administration once daily. If patients are switched from INDERAL tablets to INDERAL LA capsules, care should be taken to assure that the desired therapeutic effect is maintained. INDERAL LA should not be considered a simple mg for mg substitute for INDERAL. INDERAL LA has different kinetics and produces lower blood levels. Retitration may be necessary especially to maintain effectiveness at the end of the 24-hour dosing interval.

HYPERTENSION—*Dosage must be individualized.* The usual initial dosage is 80 mg INDERAL LA once daily, whether used alone or added to a diuretic. The dosage may be increased to 120 mg once daily or higher until adequate blood pressure control is achieved. The usual maintenance dosage is 120 to 160 mg once daily. In some instances a dosage of 640 mg may be required. The time needed for full hypertensive response to a given dosage is variable and may range from a few days to several weeks.

ANGINA PECTORIS—*Dosage must be individualized.* Starting with 80 mg INDERAL LA once daily, dosage should be gradually increased at three to seven day intervals until optimum response is obtained. Although individual patients may respond at any dosage level, the average optimum dosage appears to be 160 mg once daily. In angina pectoris, the value and safety of dosage exceeding 320 mg per day have not been established.

If treatment is to be discontinued, reduce dosage gradually over a period of a few weeks (see WARNINGS).

MIGRAINE—*Dosage must be individualized.* The initial oral dose is 80 mg INDERAL LA once daily. The usual effective dose range is 160-240 mg once daily. The dosage may be increased gradually to achieve optimum migraine prophylaxis. If a satisfactory response is not obtained within four to six weeks after reaching the maximum dose, INDERAL LA therapy should be discontinued. It may be advisable to withdraw the drug gradually over a period of several weeks.

HYPERTROPHIC SUBAORTIC STENOSIS—80-160 mg INDERAL LA once daily.

PEDIATRIC DOSAGE—At this time the data on the use of the drug in this age group are too limited to permit adequate directions for use.

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difficult hole at the Tournament Players' Club, where many of the best professional golfers invariably wind up in the water on the short (132-yard) par-3 17th hole. Mr. Dobereiner continued, "And so we should send for a neurologist rather than a surveyor to measure the worth of a hole."

My own career as a neurologist and a golfer have paralleled each other for over a quarter of a century. Over the years, I have been witness to every kind of golf swing in the world and have also been privy to some strange neuropathological syndromes. A couple of these are well known to most golfers and include the maladies termed the "yips" and the "shank."

The dreadful affliction called "yips" is one in which the victim becomes unable to execute a smooth putting stroke. Now, we all know that putting is the easiest task in the entire game of golf. However, when one has the "yips," the victim's hands seem to go into a myoclonic involuntary twitch that either scuffs the ball but a few inches while attempting to make a three-foot putt, or else he jerks the ball five feet past the hole while attempting the same putt.

The "shank" is, fortunately, not a permanent malady. However, it sometimes seems to be contagious so that most responsible golfers turn away when a fellow golfer with a reputation for shanking is faced with a short iron to the green. Some golfers don't even like to hear the word "shank" for fear that it may descend upon them. For some inexplicable reason, the ball keeps shimmying off the hosel or skims off the bottom edge of the club, and keeps going 90 degrees to the right of the intended target line. I have heard of one golfer who shanked a ball completely around a hole before he finally got the ball onto the green itself.

The purpose of this paper, however, is to describe a third neuropathological golf syndrome, for which there is as yet no accepted name. I refer to a rather unusual syndrome in which the golfer becomes unable to complete a descending stroke from the top of the swing. The afflicted victim usually has no trouble making a practice stroke, but once the ball is placed in front of him, he will take his club back, but at the top of the swing seems unable to bring it down. Instead, he'll make a couple of short, convulsive jerks so that by the time the club finally comes down to meet the ball, the energy has all been dissipated, and the ball travels but a fraction of the intended distance.

The last fellow I met who had this strange malady said he used to be a 9 handicapper but now struggles to a 23. Another fellow I know was at one time an excellent single handicap golfer, but quit the game completely after he became afflicted and hasn't touched a golf club

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The neurological aspects of this malady are not unlike the akinesia-bradykinesia seen in Parkinson's disease. There is also some semblance to the gait apraxia of normal pressure hydrocephalus, in which the victim can do anything with his feet except walk. However, after a thorough review, it seems to me that this malady is most reminiscent of the apraxic syndromes seen in central nervous system disorders of the dominant hemisphere. Despite everything he does, the unfortunate victim becomes frozen, stuck, and constipated at the top. I have been told that they have tried everything in their desperation — hitting with one hand, swinging while not looking at the ball, psychotherapy, hypnotherapy, acupuncture and chiropractics, all to no avail.

As noted earlier, no one has yet named this syndrome. I have thought of calling it Reuben's syndrome after a friend, who is the worst victim of this malady that I know of, but I thought that would be too cruel. The suggestions have included the SSS syndrome (stuck s--t syndrome), akinesia descentia and paradoxical paralytica. However, for now I will simply term it "an apraxia of the descending golf stroke."

Perhaps some day when the cause and treatment of this deadly affliction become known, we may be able to put a more suitable label on this malady.

Some Revised Rules of Golf: "Laughter, the Best Medicine" (Abstracted from Reader's Digest, April 1985.)

A ball hitting a tree shall be deemed not to have hit said tree. Hitting a tree is just bad luck and has no place in scientific game. The player should estimate the distance the ball would have traveled if it had not hit the tree, and play the ball from there.

There shall be no such thing as a lost ball. The missing ball is on or near the course somewhere, and eventually will be found and pocketed by someone else. It has thus become a stolen ball, and the player should not compound the crime by charging himself with a penalty stroke.

If a putt passes over the hole without dropping, it is deemed to have dropped. The law of gravity holds that any object attempting to maintain a position in the atmosphere without something to support it must drop. The law of gravity supersedes the law of golf.

The same thing goes for a ball that stops at the brink of the hole and hangs there, defying gravity. You cannot defy the law.

A putt that stops so close to the cup that it inspires comments like "you could blow it in" may be blown in — but only if it is no more than three inches from the hole. After all, no one wants to make a travesty of the game. Arnie Kunz, quoted by Alex Thien in Milwaukee Sentinel.

Miscellany

(Jokes as related to Claire Loo Nakatsu, our favorite MSD representative.)

How do you tell the difference between the male and female chromosomes? By pulling down their jeans. . . . (as told by OB-Gyn man **Donn Tokairin).**

The Nissan auto company had developed a new car and called in the inventor of the VW Bug to help choose a name. "How soon do you want a decision?" "Within 24 hours." "That soon?" And so it came about that the new Nissan car was called "Datsun" (Courtesy of **Reginald Patterson.)**

Two Irish blokes were sitting in a pub drinking. One said, "You know how much I love scotch. When I die, I want to be buried in it." His friend promised, "I'll gladly see that your wish is carried out . . . that is, if you don't mind if I filter it first through my kidneys." (Thanks to **Charley Judd.)**

The wealthy miser summoned his priest, his doctor and his lawyer to his death bed. . . . "I worked hard to earn my wealth. I was too busy making money, so that I never married and have no heirs to whom to leave my wealth. I am giving each of you $500,000 in cash to hold and on my death you must place the cash in my coffin." He finally died and the funeral was over. . . . The priest confessed: "I snitched $100,000 and sent it to Ethiopia for the starving." The doctor admitted: "I needed a new house so I kept $200,000 and placed only $300,000 in his coffin. May he rest in peace." The lawyer was furious: "You two are despicable. I put all $500,000 in his coffin in the form of a personal check." (As told by **Ray DeHay.)**

The ENT man and the general surgeon were boasting that each was better than the other. They decided to test their skills. The ENT man caught an owl resting on a tree nearby. He anesthesized the owl and he removed its larynx within 30 minutes. Not to be outdone, the surgeon performed a colectomy on the owl within 15 minutes. Later the same owl, now fully recovered from his ordeal, was in the neighborhood and saw a fellow owl resting on the same tree. He warned: "Watch out for that tree . . . When I woke up, I couldn't sh-- a hoot and couldn't hoot a sh--." (As told to Claire Nakatsu by **Willard Miyahira** and edited by ye editor*/Ed.)*



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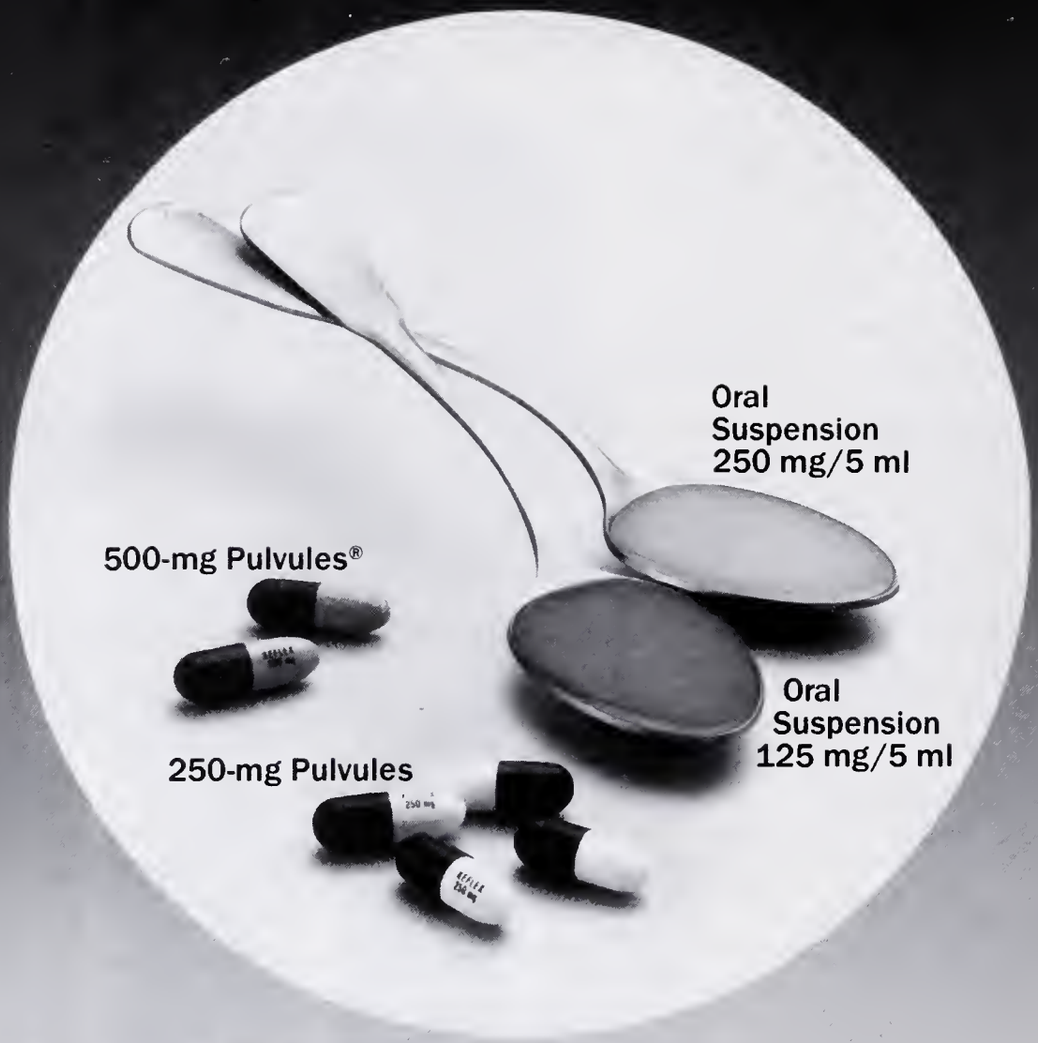
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VOL. 44, NO. 12

Hawaii Medical Journal

CONTENTS

Editorials: 461
J.I. Frederick Reppun, MD

Letter to the Editor 464
Re: UH Medical School
Terence A. Rogers, PhD

The Syndrome of Immediate Reactivities (Contract Urticaria Syndrome) 466
An Historical Study from a Dermatology Practice
II. The Atopic Diathesis and Drug Reactions
David J. Elpern, MD

Over The Editor's Desk 468
J.I. Frederick Reppun

Failure of Immunotherapy to Prolong Survival in Chronic Myeloid Leukemia 471
Robert T.S. Jim, MD

Biography — Benjamin Lee Gordon II, MD 472

Pregnancy Following Combined Microsurgical Salpingoplasty, Ovum 473
Recovery and In-Vitro Fertilization
Frederick D. Sengstacke II, MD

A Limited Review of the High-Risk Cardiac and High-Risk Trauma 477
Patients Transported by Two MICT (Paramedic)
Ambulance Units to Queen's Medical Center, 1974
J.K. Sims, MD, Livingston M.D. Wong, MD,
Jose B. Lee, Linda M. Wright, and William W.L. Dang, MD

Welcome, Charlotte Beal! 484
J.I. Frederick Reppun, MD

Hawaii Academy of Family Physicians Newsletter 484
Don and Marlies Farrell

HMA Auxiliary Newsletter 485
Lila Johnson

Address of the President 486
Joseph F. Boyle, MD

From The Kahuna Lapa'au 489

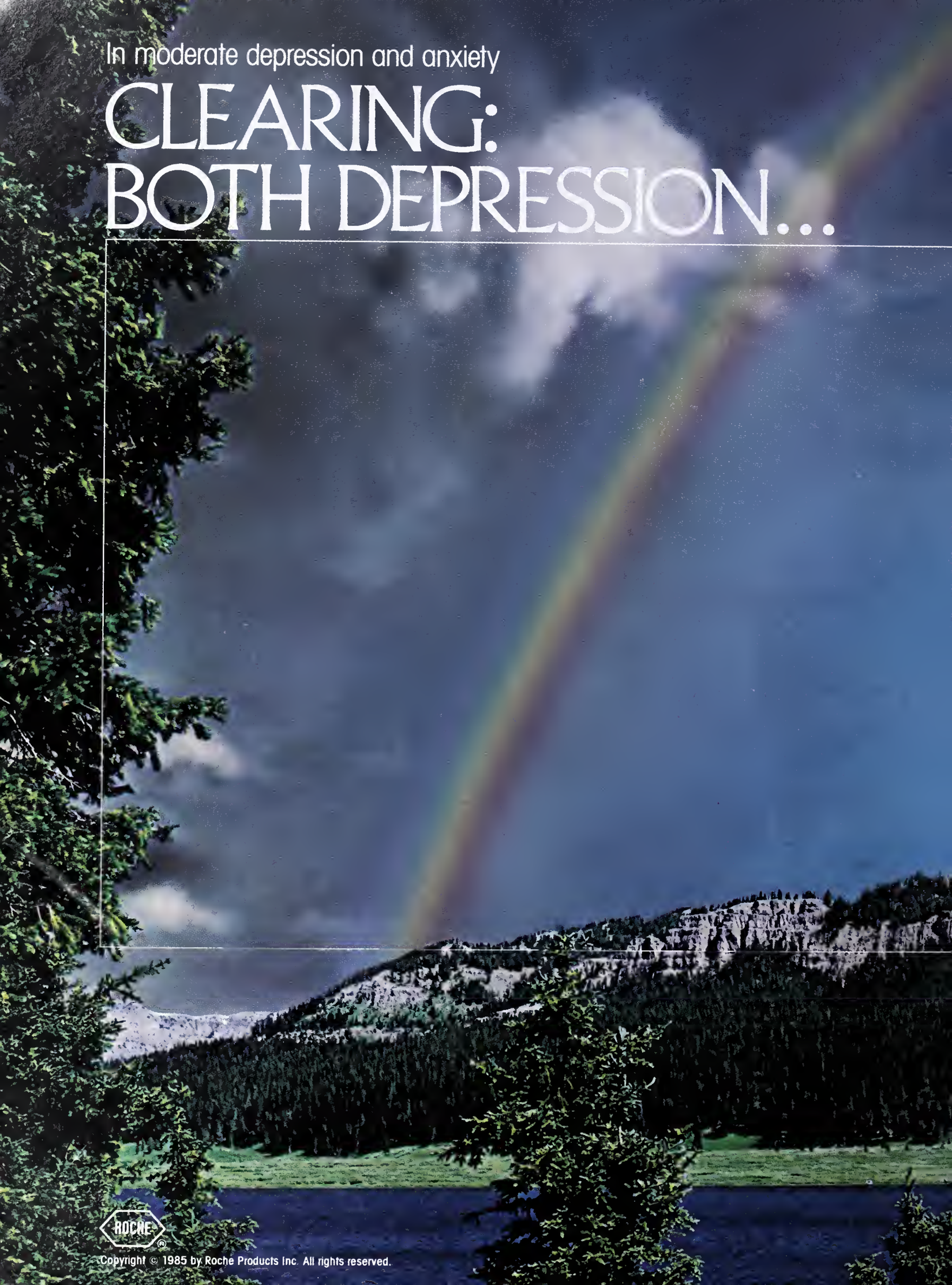
Continuing Medical Education 492

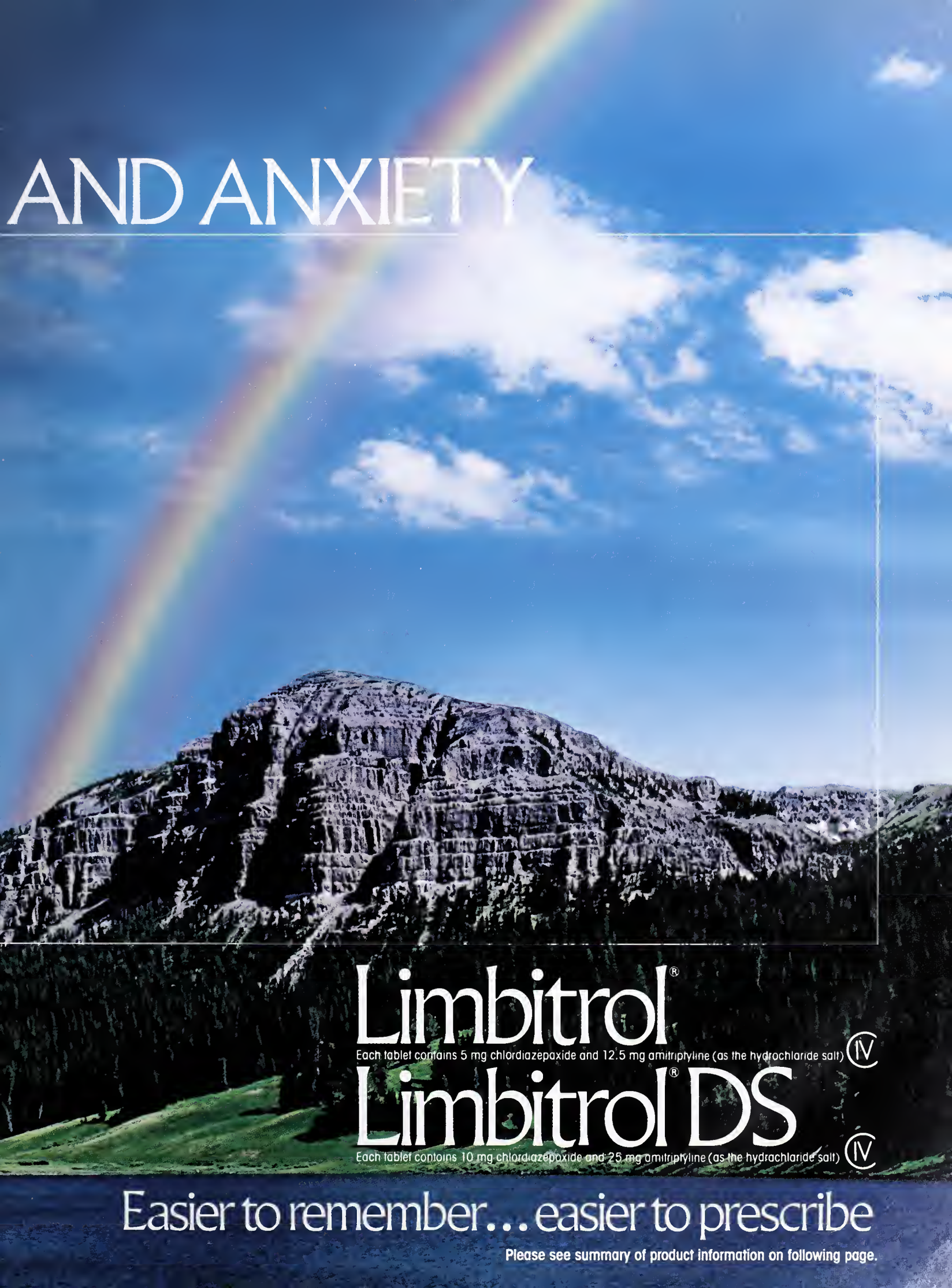
Surviving and Thriving at HMA's Annual Meeting 493

Maui Physician Named HMA President 494

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Warnings: Use with great care in patients with history of urinary retention or angle-closure glaucoma. Severe constipation may occur in patients taking tricyclic antidepressants and anticholinergic-type drugs. Closely supervise cardiovascular patients (Arrhythmias, sinus tachycardia and prolongation of conduction time reported with use of tricyclic antidepressants, especially high doses. Myocardial infarction and stroke reported with use of this class of drugs.) Caution patients about possible combined effects with alcohol and other CNS depressants and against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving.)
***Usage in Pregnancy:* Use of minor tranquilizers during the first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**
Since physical and psychological dependence to chlordiazepoxide have been reported rarely, use caution in administering Limbitrol to addiction-prone individuals or those who might increase dosage. Withdrawal symptoms following discontinuation of either component alone have been reported (nausea, headache and malaise for amitriptyline; symptoms [including convulsions] similar to those of barbiturate withdrawal for chlordiazepoxide)
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Anticholinergic: Disturbance of accommodation, paralytic ileus, urinary retention, dilatation of urinary tract.
Allergic: Skin rash, urticaria, photosensitization, edema of face and tongue, pruritus.
Hematologic. Bone marrow depression including agranulocytosis, eosinophilia, purpura, thrombocytopenia.
Gastrointestinal: Nausea, epigastric distress, vomiting, anorexia, stomatitis, peculiar taste, diarrhea, black tongue.
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Editorials

The Australians

Reading about the problems of the practice of medicine in Australia in the New England Journal of Medicine, Vol. 312 No. 1, gives cause for reflection and concern whether we in the United States someday in the not too distant future may have to face up to the possibility of a doctors' strike — as a last resort.

In Australia, in the past, most physicians' care of patients was on a fee-for-service basis. Eighty percent or so of the hospitals were owned and operated by the government. These "public" hospitals granted physicians the right to bring in and treat their private patients; in exchange, physicians "volunteered" to care for in-hospital public patients for free.

In 1975, the government began paying physicians "sessional" fees (a British term that probably means a token payment?/ *Ed.)* for attending to these public patients. This was additional income to the doctors who collected fees charged their private patients, many of whom were covered by private insurance.

"Medicare" was instituted in 1984; it provided free public hospital care for *all* Australians, funded by a system of universal health insurance based on a tax. Medicare paid physicians 85% of the fees they charged to both public and private patients.

Naturally and predictably, the government became cost-conscious and gradually imposed controls and ceilings on physicians' fees. It also eliminated any right to appeal. The Minister of Health was the supreme dictator and his rulings were arbitrary.

Specialty by specialty, the physicians fought back by every means at their disposal and within the law. When that got them nowhere, they resorted to "rolling work stoppages," mass resignations from contracts with the public hospitals. On June 20, 1984, a one-day strike was called by the Australian Medical Association (except that emergency care was provided). The government fought back by imposing stringent penalties and restrictions on practice.

On June 27, a second strike action by the AUMA "depleted the hospitals of 5,000 of their ca. 8,020 staff physicians (full-time, visiting and resident)." On July 3, the doctors' negotiating committee met with the premier and a five-point plan of agreement was consummated. The doctors returned to work at the public hospitals on the 23rd.

However, as the authors of the NEJM article stated — David Green, MD, of our Northwestern Medical School in Chicago, and Peter Castaldi, MD, of the University of Sydney, NSW, Australia — the Australian government still keeps on pushing physicians up against the wall.

There are two lessons in this for us physicians here in the U.S.A.: (1) Governments care only for the acquisition of power over the people; and, (2) Physicians can have political clout and a say in their own destiny, as well as concern for the welfare of their patients, *only* if they are united and organized.
Cave australiensem!

J.I. Frederick Reppun, MD
Editor

The School Attendance Law

The State Department of Health's Communicable Disease Report of June 1985 gave all physicians in Hawaii (all are on the government's mailing list) the gist of HRS 298, The School Attendance Law, which was amended by the legislature; it went into effect Aug. 1.

However, the explanation seems ambiguous to us: "(Every) student attending pre-school, elementary or secondary school will be required to have documentation of (a) a physical examination, (b) a Tbc skin test or chest X-ray certifying freedom from communicable tuberculosis, and (c) of immunization against polio, diphtheria, tetanus, pertussis (rubeola) measles, rubella, and mumps."

This, to us, reads as if this is now a requirement for every student, *every year.*

Much as we favor this approach to preventive medical care (we advise our patient/families to bring their kids in annually for a medical evaluation, whether it is mandated by the Department of Health or Department of Education or not), it would add considerably to expenses in a family's budget.

However, there is an insert under (b) above: "The physical examination and T.B. clearance must be completed within a year before school entrance for students entering school for the first time."

On asking: "What's new?" of Tom Hicks at the epidemiology branch, he explained that it was only the monitoring of the student's health status — annually — that was the DOH's interpretation of the law; this is to be done by school counselors and/or public health nurses. "It does not mean that each child must have a physical and clearance by a physician every year," said Hicks.

We wonder how many physicians who see children as patients have even looked at this directive! Hicks said we were the only ones who questioned it.

What's more important, how many physicians "document" as a casual chore, without really checking the immunization record carefully, or without even examining the child K through 12?

J.I. Frederick Reppun, MD
Editor

Sims on High-Risk Cases

Joel Sims, in an article in this issue of the JOURNAL, reviews the experience at Queen's Medical Center with "high-risk cardiac" and "high-risk trauma" cases, once they have entered QMC, during the calendar year 1974. The data is now 11 years old.

Sim's conclusions indicate that 37 (76%) of 49 high-risk trauma cases left the hospital alive, and 48 (54%) of 89 high-risk cardiac cases survived. He gives credit to the MICTs for the four of 31 (11.4%) survivors who had been adjudged "Code 500" cases prior to in-hospital care.

Cummins and Eisenberg, reporting in JAMA, April 26, 1985, Volume 253, No. 16, pp 2408-12, provide complementary data from 1976-1982 studies in King County, Wash., with a focus on the survival rates of patients in cardiac arrest who were given CPR by bystanders, as compared with delayed, EMS-initiated CPR.

The raw figure comparisons favor the former, with survival rates of 32% and 21% respectively, if the cardiac arrest was "witnessed."

There are a great many variables; however, Cummins and Eisenberg review their effects logically, and they conclude: ". . . any attack on CPR as dangerous or ineffective, or recommendations to abandon programs that train citizens in CPR can only be considered irresponsible."

It is to be hoped that further statistics will be developed here in Hawaii on the EMS program, on MICT training results and on citizen training in CPR.

J.I. Frederick Reppun, MD
Editor

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Farewell, President Boyle

In this issue of the JOURNAL is the "farewell" address of outgoing AMA president Joseph F. Boyle, MD, given at the annual meeting in Chicago on June 16, 1985. We have deleted a paragraph or two not pertinent to its publication here and we have done a little "editing" without altering the context. We think Dr. Boyle's remarks are particularly pointed and well said and that every physician in Hawaii should have the opportunity to read them and take them to heart.

Joe Boyle graced the 128th annual meeting of HMA's House of Delegates on Kauai in November 1984 by his presence and by his words to the assembly.

On that occasion, we remember descending in the elevator of the Kauai Surf in Nawiliwili after the noon recess, and noticing the remarkable presence of the only other passenger in that box as the doors closed. He was of medium stature, slim and trim, immaculately and fully dressed in a light tan business suit — remarkable in the sense of hardly belonging in that vacation resort peopled by lightly and leisurely dressed kamaainas and malihinis alike. However, he did look like a physician of the Joe Strode type. But no, he would hardly be attending a convention of local vacationing docs who wore mostly shorts and aloha shirts, Mainland speakers included! Attendance was mandatory — for CME credit — but courses were mainly designed as sleep periods, to catch up on the festivities of the night before, and then off to play tennis or golf or whatever beautiful Kauai had to offer.

He said not a word and had no smile on his fresh-shaven aquiline face. For some unfriendly reason, we did not greet him either. In retrospect, we wished we had, except that he might have been J. Pierpont Morgan or a preoccupied member of the FBI!

We both got out on the ground floor. With deference to his clothes rather than to the man within, although we were much his senior, we waited for him to exit first. Still no smile of recognition for the courtesy extended. Was the acceptance based on inferred rank? Perhaps he was military, we thought.

We headed for the convention center; so did he, directly and purposefully. We followed, and not too closely. We lost each other in the crowded entranceway.

Later, this same cold, impersonal, grimly serious dignitary was introduced to the re-assembly, to long and steady applause, as . . . the President of the American Medical Association, Joseph F. Boyle!

It was really no surprise to us. We had been sitting as a delegate, waiting for the afternoon session to open, half dreaming of the encounter in the elevator and suddenly waking up to wonder whether that might have been Joe Boyle, and why, of all the missed opportunities in a lifetime, hadn't we initiated a greeting, a personal welcome, a Hawaiian Aloha? "Auwe!" as we say in Hawaii.

But wait. What might we expect from this AMA president? Cold, hard facts and stuff? To the contrary.

Joe Boyle came across as an AMA president of whom we could be very proud. It is indeed unfortunate that the rules stipulate only one year in that office; the AMA needs a spokesman to whom people will listen and he fills the bill.

He spoke out forthrightly against the Administration and the Congress for placing the dollar sign over and above the Caduceus. He cited the statistic: "Forty percent of the elderly in this country live alone on an income of less than $5,000 a year." Nevertheless, Boyle had predicted the re-election of Ronald Reagan as President on the basis of the latter's image as the leader who would bring the country back to morality and a "revision of the permissiveness" that pervades our society. Boyle commended the President for that.

Boyle exhorted us in the assembly to think well on the fact that we, as physicians, have an opportunity — and should seize it — to convince the public that doctors are just as concerned about their patients' pocketbooks as they are about their health. "We have an opportunity to return to deserving the public's trust," he said, "to rededicate ourselves to professional ethics and to the best interest of our patients. Our bible should be: What's good for the patient, rather than what's good for us doctors!"

That serious visage, that non-smiling countenance, that traditional deportment and dignity that is considered "old-fashioned" nowadays masked a very warm and compassionate physician who spoke to us from his heart as well as his keen intellect. Joe Boyle, MD, now former president of the AMA, our AMA.

But read for yourselves — his remarks are published herewith with his permission — and judge for yourselves.

J.I. Frederick Reppun, MD
Editor

The Answer is No!

"Is Doctor so-and-so in?" you ask politely over the phone. "No, he isn't," comes the often heard response. "Well, can I reach him?" you continue, with a hint of exasperation. "He may be at the hospital, period."

You needed Dr. so-and-so in order to refer an important case to him; or to ask him to clarify what he had said to your patient that had upset and angered her — she was sitting right there fuming.

Do you hang up meekly? Probably not. If you are the usual, pressed-for-time, impatient physician, the prima donna that most of us are, you would force this issue: "Listen, young lady, I want Dr. so-and-so and I want him now, you hear? You get him on the phone for me, or else!" There is a frightened gasp on the other end of the line: "Yes, Doctor; may I have your number please?" "The little b--," you sputter out loud. "I'll bet she has my number!" The tables have turned. You are fuming; your patient has calmed down.

People who ask for something resent very much a no, non, nein, nyet, negative for an answer.

How much better, nicer, assuaging is a: "Yes, Doctor. He is not in at the moment, but I'll try to get him for you as soon as possible. Your phone number, please."

J.I. Frederick Reppun, MD
Editor



RE: UH Medical School

Editor:

I want to express my appreciation for the excellent editorial you wrote in the HAWAII MEDICAL JOURNAL about the medical school. It is most gratifying to have the "official" voice of the medical profession in Hawaii expressing such positive thoughts about the school. I would also like to note the extensive and accurate detail you assembled in your editorial in support of your conclusion that Hawaii has a medical school "of which we can damn well be proud." I must say you certainly had your ears at attention when John Wellington presented his briefing to the Friends at their annual meeting in May.

Our ties with community practitioners grow closer and comments like yours certainly contribute to an ever increasingly effective relationship, and it is for this that we are most grateful.

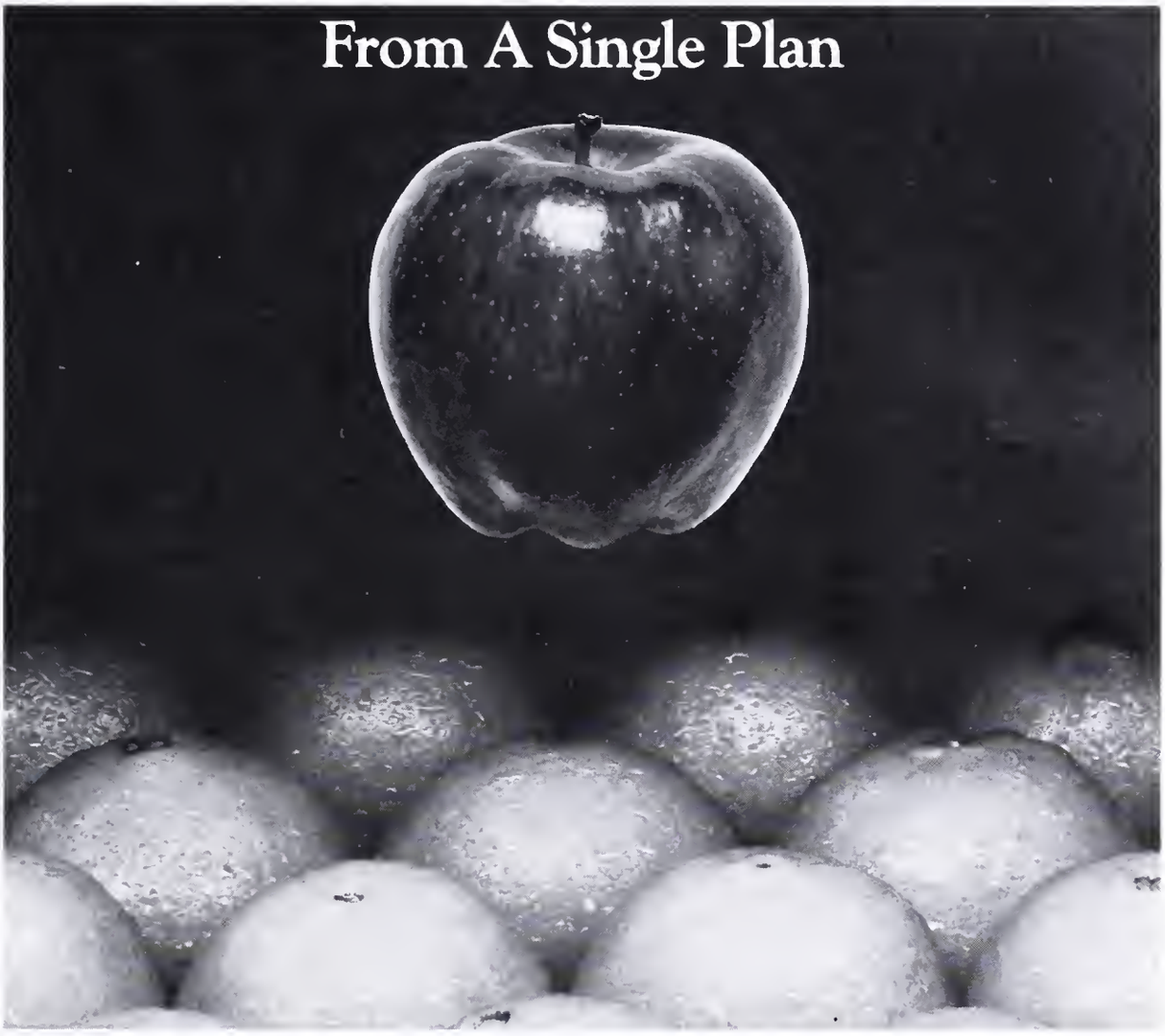
Terence A. Rogers, Ph.D.
Dean, University of Hawaii,
John A. Burns School of Medicine

The Editor Replies:

Thanks for the kudo, Terry, but what's important is your statement that town and gown are coming together!

J.I. Frederick Reppun, MD
Editor

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The Syndrome of Immediate Reactivities (Contact Urticaria Syndrome) An Historical Study from a Dermatology Practice II. The Atopic Diathesis and Drug Reactions

David J. Elpern, MD*

Twenty-six percent of 1,011 consecutively questioned dermatology patients were found to have histories of immediate reactivities to numerous encountered substances. Classically called the Contact Urticaria Syndrome, the term I prefer is Syndrome of Immediate Reactivities. Age, sex, race, and putative substances were discussed in Part I of this trilogy.

Personal and family histories of asthma, hay fever, and atopic skin disease were recorded for all patients seen. Incidence was much higher in the group with histories of immediate reactivities in almost every parameter studied. Hawaiians and part-Hawaiians had the highest incidence of atopy and family history of atopy of all ethnic groups studied. Twice as many patients with a history of immediate reactivities gave a convincing history for drug allergy.

These data confirm speculations in the literature that the Contract Urticaria Syndrome is more commonly found in the atopic than the non-atopic individual. The suggestion is also made that patients with this syndrome may be at high risk for immediate-type drug reactions.

Introduction

The term Contact Urticaria Syndrome (CUS) refers to the rapid generation of diverse symptoms after contact of the skin or mucous membranes with a host of substances.[1, 2] Because urticaria is only one of the many manifestations seen, the eponym CUS is imprecise and confusing. For this reason, an alternate title, the Syndrome of Immediate Reactivities (SIR), has been proposed[3] and will be used throughout this report.

In an attempt to determine the incidence of SIR in a dermatologic practice, 1,023 consecutive patients were surveyed. Part I[3] dealt with the parameters of age, sex, race, and the substances implicated by the 261 positive respondents.

Reviews and case reports of CUS all allude to a predilection for it to occur in atopic individuals; however, no systematic evaluation of this supposition had been undertaken previously.

Part II deals with the incidence of personal and family history of atopy as it relates to a history of SIR and compares this to persons without such history. The last 300 patients also were questioned about a history of drug allergy.

Methods

A description of the practice studied and a discussion of the methods used for data collection were given in Part I.[3] All patients studied were questioned afterward about the existence of a personal or family history of atopy. Atopy was defined as a convincing history of bronchial asthma (BA), allergic rhinitis (AR), or atopic skin disease (ASD) contracted by the patient or by a first-degree relative (parents or siblings only).

The criteria used for accepting a his-

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Accepted for publication August 1985.

TABLE 1.

Incidence of Atopy in the Study Population

	SIR (+)	SIR (-)	Total (+ and -)
Number	**257**	**750**	**1007**
Personal History of Atopy	46%*	21%	27%
Asthma	22	10	13
Hay Fever	24	10	14
Eczema	16	5	8
Family History of Atopy	44	27	32
Asthma	28	17	19
Hay Fever	17	12	13
Eczema	9	4	5
Personal or Family History of Atopy	60	37	43

* Percent rounded off to nearest whole number.

TABLE 2.

Ethnicity, SIR, and History of Atopy

	Caucasian CUS		Japanese CUS		Filipino CUS		Haw/Part-Haw CUS	
	+	-	+	-	+	-	+	-
Total Number	113	325	49	112	44	139	34	84
Personal History								
Any	42%*	21%	39%	21%	43%	17%	47%	32%
Asthma	24	9	12	11	18	7	26	13
Hay Fever	27	11	22	13	18	11	20	13
Eczema	11	4	8	5	20	4	18	10
Family History								
Any	35	26	33	24	36	22	59	39
Asthma	23	12	8	16	27	14	44	30
Hay Fever	15	14	18	9	7	8	12	32
Eczema	7	5	10	4	16	3	0	6
Personal or Family History								
Any	56	34	47	31	60	27	74	52

* Percent rounded off to nearest whole number.

TABLE 3.

History of Drug Reaction in the Study Population

	SIR (+)	SIR (-)	Total
Number	74	227	301
Drug Reaction	25	39	64
Percent with Drug Reaction	34	17	21

tory of BA, AR, or ASD were:

BA: An episodic disorder characterized by wheezing, coughing and shortness of breath.

AR: Recurrent (usually seasonal) episodes of nasal congestion associated with clear watery discharge and paroxysmal sneezing, often following exposure to known or suspected allergens.

ASD: A pruritic eruption associated with dry lichenified skin; a history of characteristic locations (e.g. face, scalp and neck in infants, flexural areas in older children, and flexures and hands in adults) was sought. The dry localized form of neurodermatatitis (Lichen simplex chronicus) was not included here.

During the course of the study, it became obvious that a significant number of patients with a history of SIR were aware of adverse drug reactions. For this reason, the last 300 patients were questioned for a history of drug reaction. Care was taken to exclude reactions that were the result of overdosage; side effects such as excessive sedation or gastrointestinal irritation; secondary effects such as candidiasis from antibiotics; and idiosyncrasy such as hemolysis in patients who were G6PD-deficient. The reactions included were those felt most likely to be hypersensitive in origin. These included anaphylaxis, urticaria, pruritus, exanthems and serum-sickness. It is recognized, however, that some of these reactions may not be allergic in nature. In addition, as no distinction between immunologic and nonimmunologic immediate reactivity was made in this study, it may be unreasonable to restrict drug reactions to those of hypersensitive etiology.

Results

Table 1 shows the breakdown of patients with and without a history of SIR as this relates to the various atopic parameters. In every category, patients with a positive history had a higher incidence of atopy or a given atopic manifestation.

Table 2 compares ethnicity, SIR and history of atopy. In all groups, there was a strong relationship between history of SIR and atopy. The exceptions were the family histories of AR in Caucasians, Filipinos, and Hawaiians, and the family histories of ASD in Caucasians and Hawaiians.

The incidence of drug reactions in patients with and without a history of SIR is depicted in Table 3. Thirty-four percent of patients with a history of SIR gave a convincing history of drug allergy, as opposed to 17% of patients with no such history.

Discussion

The data presented confirm statements made in the literature that patients with SIR are more likely to be atopic than so-called normal individuals. Almost every atopic parameter was more commonly found in individuals with a history of

TABLE 4.

Incidence of Atopic Dermatitis in Ethnic Groups on Kauai
March 1981 to August 1983
Total Number of Patients: 194*

	Caucasian	Japanese	Filipino	Haw/part-Hawaiian
Observed	15%	18%	43%	25%
Expected	30	27	26	16

* No racial mixtures other than part-Hawaiian included.

immediate reactivity than in those lacking such history. The exceptions found were in cases with family histories of AR and ASD. Family history was difficult to obtain in many cases, and is probably the least accurate parameter studied.

The higher percentage of Hawaiians with a personal or family history of atopy as compared with the other groups (See Table 3) may be significant, but further studies will be needed to corroborate this, as the numbers are small. Analysis of patients with atopic dermatitis from my practice on Kauai (See Table 4) shows a disproportionate number of Filipino and Hawaiian patients, and this may be related to the above finding. Because of language difficulty the data for Filipinos in this study may not accurately reflect the true incidence of SIR in that cohort.

Living conditions of the various ethnic groups differ, and this may play a role in the development of atopy. The incidence of respiratory allergy in various ethnic groups has been shown to be related to exposure to highly antigenic substances[4] in the environment and this may hold true for other manifestations of atopy as well. Hawaiians, as a rule, tend to live in older houses where the chance of exposure to antigens that commonly trigger atopy, such as dust, molds, mites and cockroaches, may be more prevalent.

Drug allergy was twice as frequent in patients with a history of SIR as those without. However, only the last 300 patients were studied for this. The question was added because it became obvious that patients with positive responses for SIR seemed to have more drug allergies than those with no such history. A history of drug allergy is now being elicited from all patients seen in our clinic.

This finding is interesting because one would have predicted that patients with immediate reactions to a wide variety of substances might also be more likely to have immediate reactions to drugs. A history of SIR may, therefore, be a marker for patients more likely to develop immediate reactions to drugs and greater consideration might be given to prescribing drugs likely to cause immediate reactions in such patients. It would also be important to determine if the patient suffered from an immunologic, or nonimmunologic, immediate reactivity because the former group might more likely be at risk. An interesting corollary of this finding is the study by Rajka and Skog,[5] which showed that atopics and persons with a history of urticaria were more likely to have a history of immediate reactions to drugs than persons with no such history. It appears that atopy and SIR — possibly immunologic SIR in particular — may be markers for the patient who is likely to develop severe hypersensitive-type drug reactions. Further work will be necessary to confirm this hypothesis.

The data presented confirm speculations made by students of CUS: that it is more likely to occur in the atopic than in the non-atopic individual. Indeed, atopy was found about twice as often in patients with a history of CUS as in those without. A history of drug allergy was also elicited twice as often in the group with SIR. This finding was unexpected, but conforms to a study on increased incidence of drug allergy in persons with a history of atopy or urticaria.[5]

Part III[6] of this study will address the data presented in Parts I and II,[3] and try to assign a place for SIR in the diagnosis of patients with a diverse group of poorly understood symptoms.

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Over the Editor's Desk

KWCMC — Kapiolani Women's and Children's Medical Center — has come out in its slick publication, Ha'i Mai, August 1985, Vol. 7, No. 8, with excellent histories of the now combined institutions at the corner of Punahou and Bingham streets. Originally separate hospitals, Kapiolani Maternity and Kauikeolani Children's, the one at Punahou and the other on Kuakini Street, they combine specialized maternal and child care in a medical center affiliated with the medical school in a teaching and research program. It is hoped that every physician in the state has received a copy of this "Special Retrospective Issue."

* * *

A contraceptive device that is injected just beneath the skin of a woman's upper arm has been found safe and effective by the World Health Organization. The implant contains small micro-capsules of progestin, a synthetic hormone used in birth control pills. The capsules, which are gradually released into the system for a period of up to five years, act to inhibit ovulation and thicken cervical mucus, thus impeding sperm penetration. The device has the effectiveness of sterilization, but the effects are reversed with removal. It costs an estimated $30 to $60.

* * *

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* * *

People over 50 years old have better chances for a full recovery from cancer the earlier the problem is found and treated. That means they have the most to gain from learning about its symptoms. A free brochure, "Cancer Facts for People Over 50," lists symptoms to watch for and recommends regular medical tests to take. It will be mailed free to everyone calling the Hawaii Cancer Information Service from 8:30 a.m. to 4:30 p.m. weekdays. The number is 524-1234. Neighbor Island residents may call collect (dial zero first). The chances of surviving cancer today are better than ever before, the National Cancer Institute booklet states.

(Continued on page 474)

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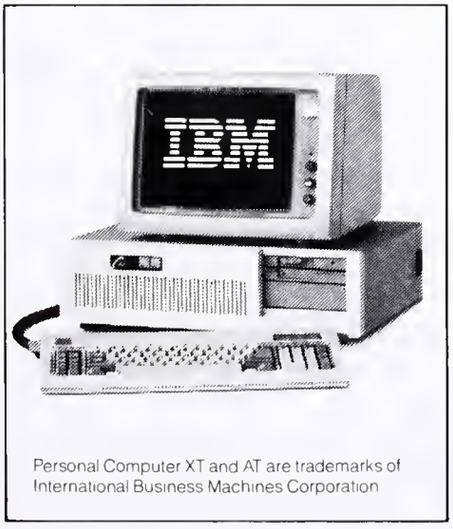
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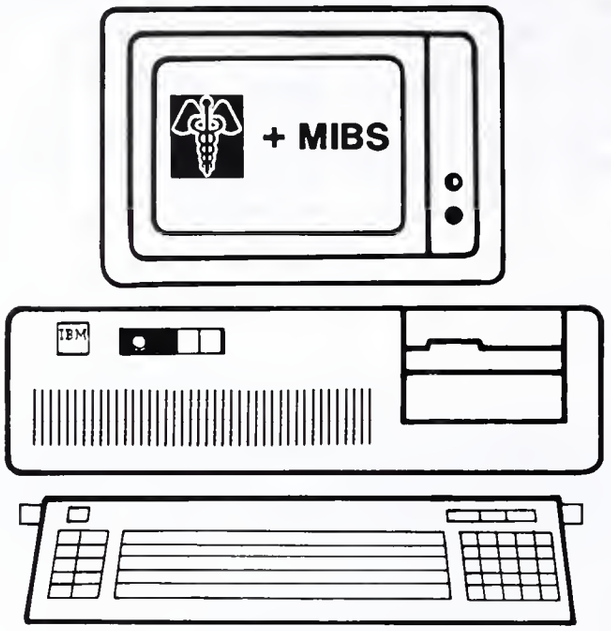
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Failure of Immunotherapy to Prolong Survival in Chronic Myeloid Leukemia

Robert T.S. Jim, MD*

Despite modern-day chemotherapy for chronic myeloid leukemia (CML), no substantial improvement in survival has occurred. Attempts with immunotherapy have been unsuccessful.[1-4] In this report, immunotherapy with BCG, levamisole, CML leucocyte, and spleen vaccines has also proved disappointing.

Materials and Methods

CML leucocyte vaccine was made by collecting the patient's own leukemic leucocytes with an Aminco blood cell separator, then treating the cells with KOH and sterilizing them by filtration.** Spleen vaccine was made from a spleen removed from patient S.S., treated with KOH, and sterilized in similar fashion. Each patient received his own leucocyte vaccine.

BCG, Levamisole, leucocyte or spleen vaccines were given to six patients with CML for periods ranging from two to 11 months. (See Table 1.) In all patients, the white blood count was brought to normal with bulsulfan or hydorxyurea before immunotherapy was given. Levamisole (Janssen Pharmaceutical) 300 mg. was given orally at weekly intervals unless otherwise stated. BCG was given by scarification, and leucocyte and spleen vaccines by intradermal route at one- to two-week intervals.

*Professor of Medicine, University of Hawaii School of Medicine

**Prepared by Benjamin Gordon, MD, PhD, Kuakini Hospital, Honolulu. (Since deceased.)

Presented at the St. Francis Hospital Oncology Conference, Jan. 29, 1985.

Accepted for publication June 1985.

Results

The duration of leucocytosis-free remission following the administration of chemotherapy and during the initiation of immunotherapy ranged from 0.5 to 11 months, the average being 4.4 months. In a control CML patient not given immunotherapy, the duration of remission after bulsulfan treatment was five months. The survival of the six patients given immunotherapy with BCG, levamisole, leucocyte, and spleen vaccines ranged from 3-1/4 to 10 years. (See Table 1.) The survival of a control group of 11 patients with CML, whose ages ranged from 14 to 60 years, treated with conventional chemotherapy (mostly bulsulfan), but not given immunotherapy, ranged from 4-1/2 to 11 years, the median survival being 4.8 years. (See Figure 1.) No significant difference in survival was noted between the two groups.

Discussion

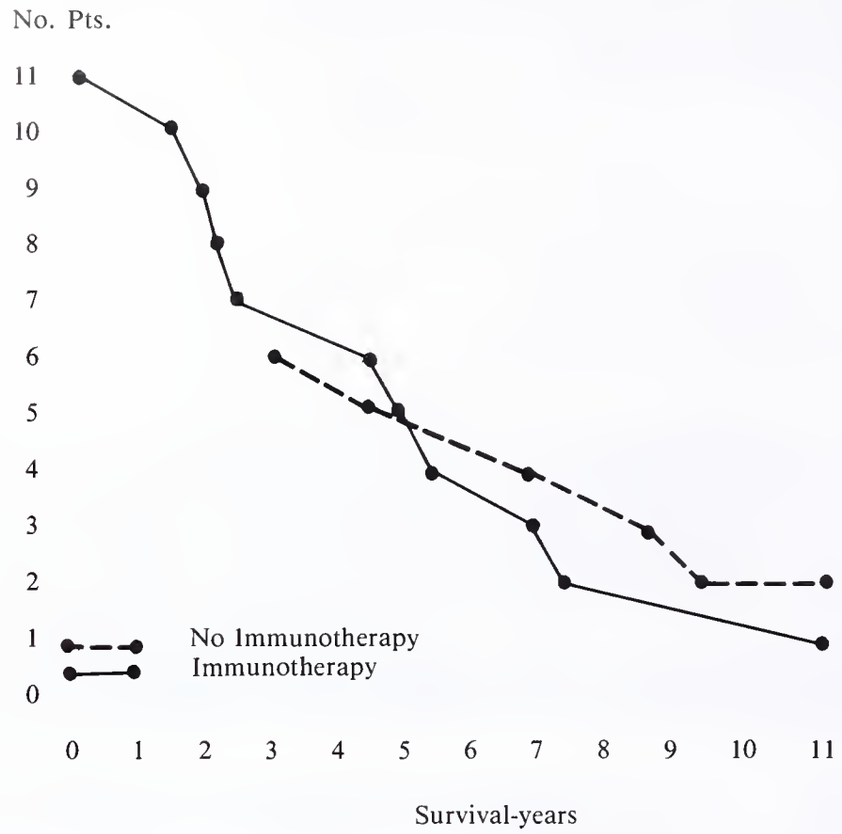
The earliest attempt to treat CML with immunotherapy was by Brittingham, who gave anti-CML serum, prepared from himself, to a patient with CML with transient hematologic benefit.[1] Sokal gave vaccine made from cultured CML Blast cells to CML patients without any improvement in survival.[2,4] Hester et al. have shown that the addition of BCG to CML patients treated with chemotherapy and splenectomy did not improve survival.[3]

TABLE 1.
Chronic Myeloid Leukemia Patients Treated With Immunotherapy

Initials	Age	Sex	Diagnosis Date	Number of BCG injections	Levamisole: months given	Vaccine injections Leucocyte/ Spleen	Period Given	Months Given	Death Date	Survival years
H.Y.	40	F	6/68	10	2		10-12/75	3		
				9	3	NA/9	1-5/77	5	4/77	9-1/2
E.F.	31	F	8/76	13			12/76-2/77	3		
					3	NA/13	3-12/77	9	Alive	9 ?
S.S.	45	F	4/74	12		12/NA	6-12/75	6		
				14	11	NA/14	9/76-7/77	10	7/82	7
R.Y.	38	M	9/77			10/NA	7-9/78	3		
						NA/3	7-10/78	4	6/80	3-1/4
R.L.	53	F	5/76	12			3-7/78	7		
						NA/12	3-7/78	7	10/80	4-1/2
E.N.	59	M	12/74		12		5/75-5/76	11		
				4			4-5/75	2		
				12		NA/12	10/76-7/77	9	Alive	10

FIGURE 1.

Effect of Immunotherapy on CML Survival



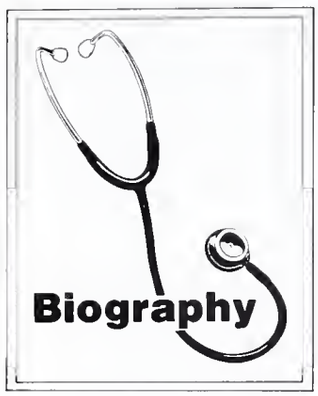
In our study, immunotherapy with BCG, levamisole, leucocyte, or spleen vaccine given in addition to conventional chemotherapy to six patients with CML did not improve survival, as compared to 11 control patients with CML who were treated with similar chemotherapy but not given immunotherapy.

The survival found in ths study for CML patients treated with immunotherapy does not appear significantly different from CML patients not treated with immunotherapy. immunotherapy appears to be of little or no value in the treatment of CML. Preparation of more potent vaccines, attempts at more intensive remission before immunotherapy is instituted, and earlier or longer immunotherapy may be more promising.

Readers: Your attention is directed to a biography of Dr. Gordon below.

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M. Coleman Harris, MD

Benjamin Lee Gordon II, MD, 1940-1982

Benjamin Lee Gordon II, one of our most brilliant allergists and clinical immunologists, died on April 19, 1982, at the early age of 42.

I came to know Ben Gordon when he was studying for his PhD in bacteriology at the University of California at Berkeley. In 1967, I persuaded him to allow me to publish his important paper on The Case of Cytophilic Antibody in Cellular Immunity in the Annals of Allergy. It received considerable favorable comment from the scientific community.

It was closely followed by other articles in the Annals, including his Studies on the Murine Plasma-cell Neoplasm, Enhancement of Host Defense Mechanisms Agsinst Gram-positive Pyogenic Coccal Infections with Levo-tetramisole (Levamisole) in Neonatal Rats, and many others. His last contribution was in 1977, when the Annals of Allergy published his paper titled Treatment of Systemic Lupus Erythematosus with the T-cell Immunopotentiator Levamisole: A Follow-up Report of 16 Patients under Treatment for a Minimum Period of Four Months. He wrote several textbooks, among them Essentials of Immunology. (F.A. Davis Company, 1969). A second edition became available in 1974 because of the demand by university teachers and students.

It would not be possible to list all of Dr. Gordon's research interests and projects — they ranged from oncogenic viruses to the pathogenesis of multiple myeloma, the aetiology of and immunology of mesenchymal diseases, and the immunoassay of polypeptide hormones. His influence on science will be felt for many years to come.

In addition to holding the degrees of PhD and MD, Dr. Gordon earned a BA in biology from the State University, New Brunswick, N.J. (1960), and an MA in biology (parasitology) from Brandeis University, Waltham, Mass. (1963). He was a member of Sigma Xi, the Alpha Omega Alpha Society, the American Thoracic Society, the American Society for Microbiology, the American Society for Tropical Medicine and Hygiene, the New York Academy of Sciences; and a fellow of the American College of Allergists.

Dr. Gordon held a large number of academic appointments. Until 1973, he was assistant professor and head of the Division of Clinical Immunology and Allergology, Department of Pediatrics, University of British Columbia, Canada. In 1973, he moved from Canada to Honolulu, where he became associate professor of tropical medicine at the University of Hawaii, as well as consultant in immunology and immunohematology, Department of Medicine, Tripler Army Medical Center.

Benjamin Lee Gordon was a delightful person in every respect and a joy to be with. I shall always be proud of numbering him among my close friends.

He is survived by his wife, R.A. Trisnowati Gordon; his children, a son named Cyrus Hertzl Gordon II, a daughter, Soroyawati Gordon, a son, Maurice Bear Gordon II; his father, Maurice Bear Gordon, MD; his mother, Mrs. Muriel Gordon; and his sister, Susan Joan Gordon, MD. We express utmost sympathy at their loss.

As Chauncey D. Leake wrote in the New York Journal of Medicine 60:1946, 1960: "Let us remember always that whatever truth we may get by scientific study about ourselves and our environment is always relative, tentative, subject to change and correction, and that there are no final answers."

Pregnancy Following Combined Microsurgical Salpingoplasty, Ovum Recovery and In-Vitro Fertilization

Frederick D. Sengstacke II, MD*

Intraoperative oocyte recovery and transfer of the inseminated oocyte to the fallopian tube followed by pregnancy,[1] as well as in-vitro fertilization and intrauterine embryo transfer following ovum recovery at the time of laparotomy with subsequent pregnancy,[2] have been reported. In the case report presented below, successful pregnancy has resulted from combined microsurgical salpingoplasty, in-vitro fertilization and intrauterine embryo transfer of ova obtained during laparotomy.

The patient is a 23-year-old nulligravid woman with a history of infertility of greater than two years' duration. Prior infertility workup revealed tubal factor infertility as well as male factor oligospermia. Tubal occlusion was previously documented by means of hysterosalpingography and laparoscopy.

The patient's last normal menstrual period was March 16, 1985. The patient was scheduled for microsurgical reconstructive fallopian tube surgery on March 29, 1985. She received a combination of Clomiphene Citrate, 150 mg per day on days three through seven of her cycle and Human Menopausal Gonadotropin, two ampules each, on cycle days seven, nine, and 11. She received Human Chorionic Gonadotropin, 10,000 units on day 13 and had laparotomy with tuboplasty and ovum recovery on day 14 of the cycle.

Ultrasonography performed on day 13 prior to surgery revealed eight developing follicles in both ovaries combined, the largest of which was 2.2 cm in diameter.

The patient was taken to surgery on March 29, 1985, at which time eight ovarian follicles were aspirated and a microsurgical bilateral salpingoplasty was performed. The follicles were aspirated with an 18-gauge needle connected to a Delee suction trap at120 mm. Hg. wall-suction. This method is similar to that reported by Renou, et al.[3]

Two mature ova were recovered. Using a standard sperm washing technique, spermatozoa were concentrated and six hours after follicular aspiration, the ova were inseminated with 10^5 motile sperm per ovum in 1 ml of insemination medium. Twenty hours after aspiration, 2 pronuclei were visible within each ovum. Forty-eight hours after aspiration, both ova had cleaved to evenly sized blastomeres. Both embryos were transferred into the uterus, using an epidural catheter, on April 2, 1985. The patient was discharged on the fourth day post-op and given Progesterone vaginal suppositories, 50 mg per day, for luteal phase supplementation. On April 12, 1985, 10 days post-embryo transfer, a serum B HcG was 12.3 mIu/ml.

Should the pregnancy continue, an ultrasonic evaluation will be performed at six weeks post-embryo transfer.

Discussion

Combined micro-tuboplasty with in-vitro fertilization and embryo transfer is a viable method of achieving pregnancy in patients who are undergoing reconstructive fallopian tube repair for tubal factor infertility. In this case, a male factor was also present and this is considered to be an indication for in-vitro fertilization as well. The method used in this case offered the advantage of providing the patient with two potential means of achieving successful pregnancy at the same time. Although this method is not the method of choice in all cases of tubal factor infertility, in selected cases it offers definite advantages over either single method used alone.

Accepted for publication June 1985.

* Department of Obstetrics and Gynecology, Wilcox Memorial Hospital, 3420-B Kuhio Hwy. Lihue, Kauai, Hawaii 96766

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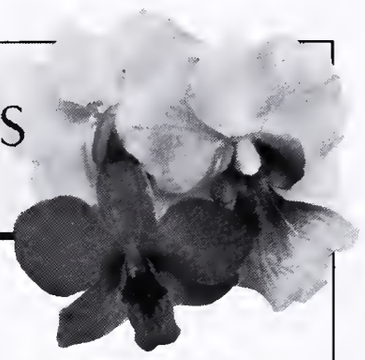
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Over the Editor's Desk

(Continued from page 468)

Americans Launch Enterprise to Deliver Health Care by Sailing Ship to Micronesia — A major non-profit private initiative to bring desperately needed health care to farflung islands in Micronesia was announced at a press conference attended by leading foreign dignitaries and government officials. The delivery system will be sailing ships.

Among those attending the announcement at the St. Francis Yacht Club was Chief Secretary Oscar de Brum of the Marshall Islands, who praised the efforts of the MARIMED Foundation, a Honolulu-based non-profit organization spearheading the private $2.6 million fundraising effort.

Founded in 1984, MARIMED is dedicated to providing medical care and health training to the remote island people of Micronesia.

The MARIMED project has the full support of the Republic of the Marshall Islands and the U.S. government, although, as a private sector initiative, no federal monies are being requested or provided. The Marshall Islands have been part of the U.S.-administered trust territories since 1947, but expect to achieve political independence this year.

Major health problems plague the people spread over tiny remote islands in the middle of the Pacific Ocean. Tuberculosis, diabetes, hypertension, venereal disease, alcoholism, suicide and infant mortality are rampant.

MARIMED founders Higgins and his obstetrician wife, Lonny, have devised a plan to use 150-foot, steel-hulled sailing vessels as floating health and education support centers outfitted with training aids and modern medical facilities, including operating and X-ray rooms and a diagnostic laboratory. Trained medical personnel will volunteer their services.

U.S. Ambassador Fred M. Zeder, of the Office of Micronesian Status Negotiations, said, "The United States has historic ties, moral responsibility and strategic interests in Micronesia. The MARIMED project takes the lead in providing a practical solution to a real health problem."

The first medical treatment and training will begin late in 1987. For more information, contact MARIMED, 1210 Auahi St., Honolulu (808) 537-5586.

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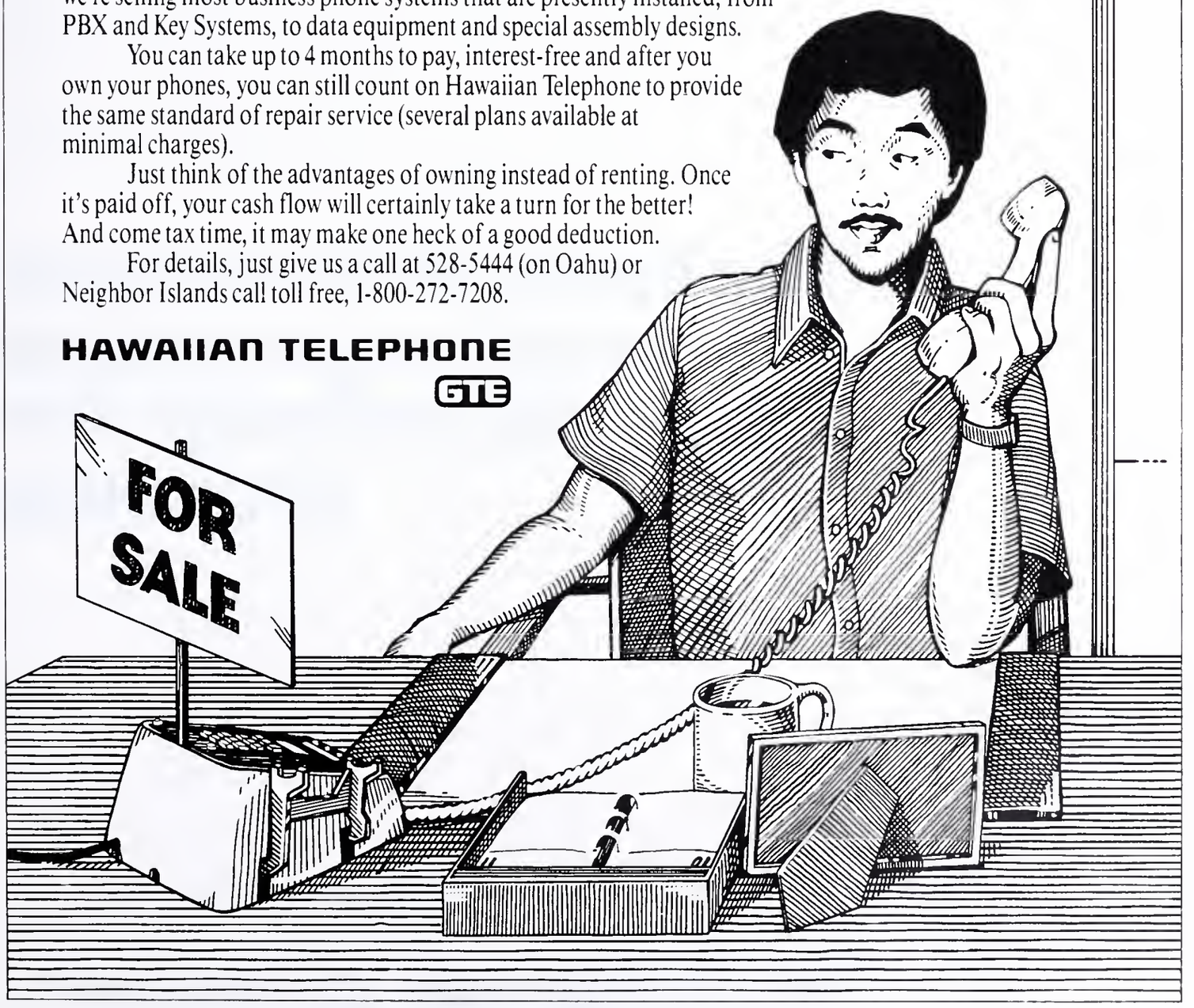
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A Limited Review of the High-Risk Cardiac and High-Risk Trauma Patients Transported by Two MICT (Paramedic) Ambulance Units to Queen's Medical Center, 1974

J.K. Sims, MD, Livingston M.F. Wong, MD,
Jose B. Lee, Linda M. Wright, and William W.L. Dang, MD*

This report is concerned with "high-risk cardiac" and "high-risk trauma" patient outcomes, relative to potential for mortality, for patients transported to the Queen's Medical Center (QMC) in ambulances staffed by the Mobile Intensive Care Technicians (MICTS) in Honolulu, Hawaii, between Jan. 1, 1974, and Dec. 31, 1974.

This data is pertinent in evaluating the quality of patient care in an emergency medical services system.

Methods

Data for the study was reported on the High-Risk Studies forms. It includes the following categories of information: Patient's Name; Ambulance Report Form Number (Amb. #); QMC Emergency Room Chart Number (ER #); QMC Hospital Chart Number (Hosp. #); Date of the Emergency (Date); Hawaii Emergency Medical Services Program Code Number (HEMSP #); Sex; Age; Date Discharged from the QMC Emergency Room (Date Disch ER); Date Admitted to QMC Ward (Date adm. ward); Date Admitted to QMC Critical Care Unit — CCU, MICU, CIU, or SICU — (Date adm. CU); Date Patient Expired in QMC ER (Date exp. ER); Date Patient Expired in Queen's Medical Center in-hospital (Date exp. Hosp.); Date Patient Discharged from Hospital (Date Hosp. Disch); Autopsy YES/NO; Autopsy Results; Final Diagnosis or Diagnoses (Final Diagnosis); International Classification of Diseases, Abridged, Code of Final Diagnoses — HICDA, ICDA, or APA Diagnostic and Statistical Manual of Mental Disorders (ICDA Code of Dx); High-Risk Cardiac Status: YES/NO (Hi-Risk Cardiac); High-Risk Trauma Status: YES/NO (High-Risk Trauma).

The population of the State of Hawaii in 1974 was estimated to be 846,869 (792,281 civilians and 54,588 members of the armed forces), whereas the estimated population of Oahu in 1974 was 691,168 (636,881 civilians and 54,287 armed forces).[1] The government of the Island of Oahu is that of a combined city and county government known as the City and County of Honolulu. The City and County of Honolulu was required by state law to provide emergency ambulance services in 1974.

Results

The Ambulance Service of the City and County of Honolulu Department of Health received 19,758 calls for the dispatch of emergency ambulances to attend medical emergencies during calendar year 1974. Of these 19,758 calls, 29% resulted in the dispatch of either the Baker-1 (stationed at the Queen's Medical Center, or QMC) or the Charley-1 (stationed at St. Francis Hospital) Mobile Intensive Care Technician staffed ambulance units (henceforth designated Baker-1 and Charley-1, respectively).

Baker-1 and Charley-1 were the only completely MICT-staffed ambulance units in operation in Honolulu for 1974; data from other units were excluded from this study because of this.

The MICTs staffing these ambulances

* From the Hawaii Medical Association's Emergency Medical Services Program. Supported by the U.S. Department of Health, Education, and Welfare under the EMS Act of 1973 (Public Law 93-154).

Accepted for publication June 1985.

FIGURE 1.

Areas of Coverage for City & County Ambulance Units—Oahu

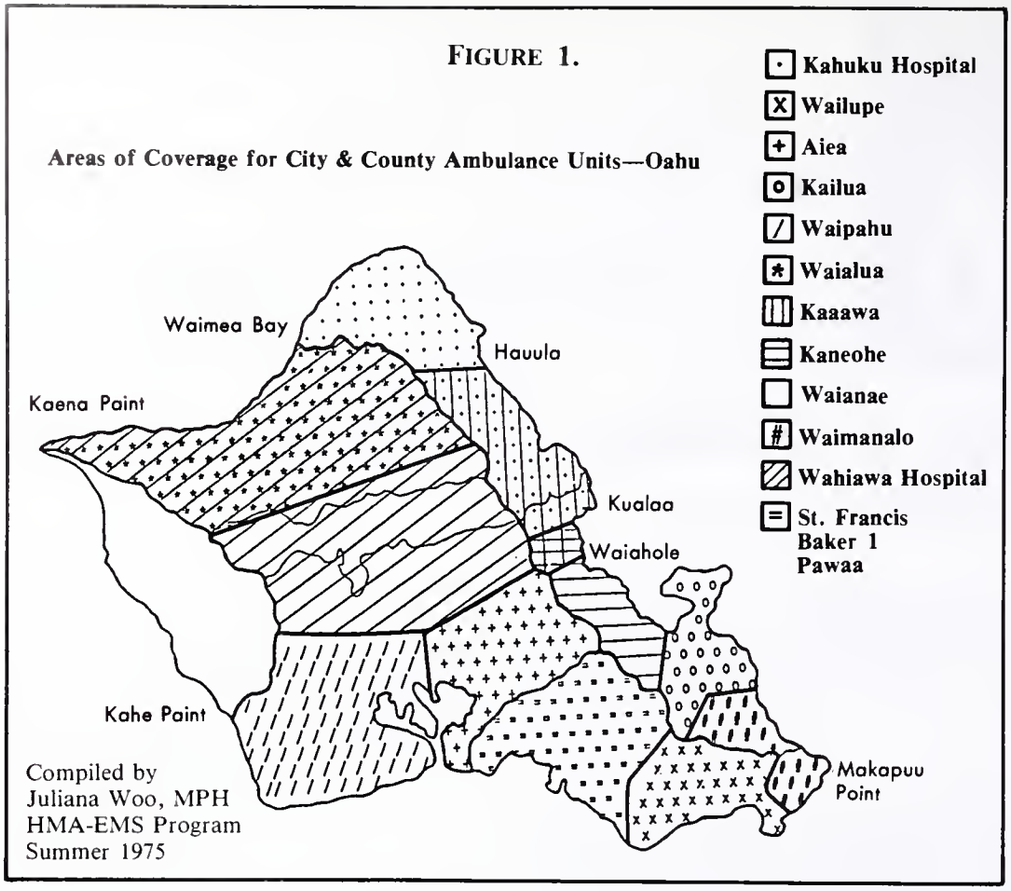


TABLE 1.
Comparative Mortality and Survival Results

Category	Number	Overall Mortality		Discharged from Hospital (Overall Survival)	
		Number	Percent	Number	Percent
High-Risk Trauma	49	12	24%	37	76%
High-Risk Cardiac	89	41	46%	48	54%
Cardiopulmonary Arrest (Code 500)	35	31	88.6%	4	11.4%
Acute Left Ventricular Infarctions	27	6	22%	21	78%
Acute Coronary Insufficiency	14	12	86%	2	14%
Acute Left Ventricular Infarctions and Acute Coronary Insufficiency	41	18	44%	23	56%

provide advanced pre-hospital emergency medical care including, but not limited to, endotracheal intubation, intravenous cannulization, intravenous fluid therapy, electrical cardiac defibrillation, electrocardiograph (EKG) interpretation, and intravenous medication administration under remote radiotelemetry communication (via a Motorola Coronary Observation Radio) with a full-time emergency room physician alternating between QMC and St. Francis Hospital.

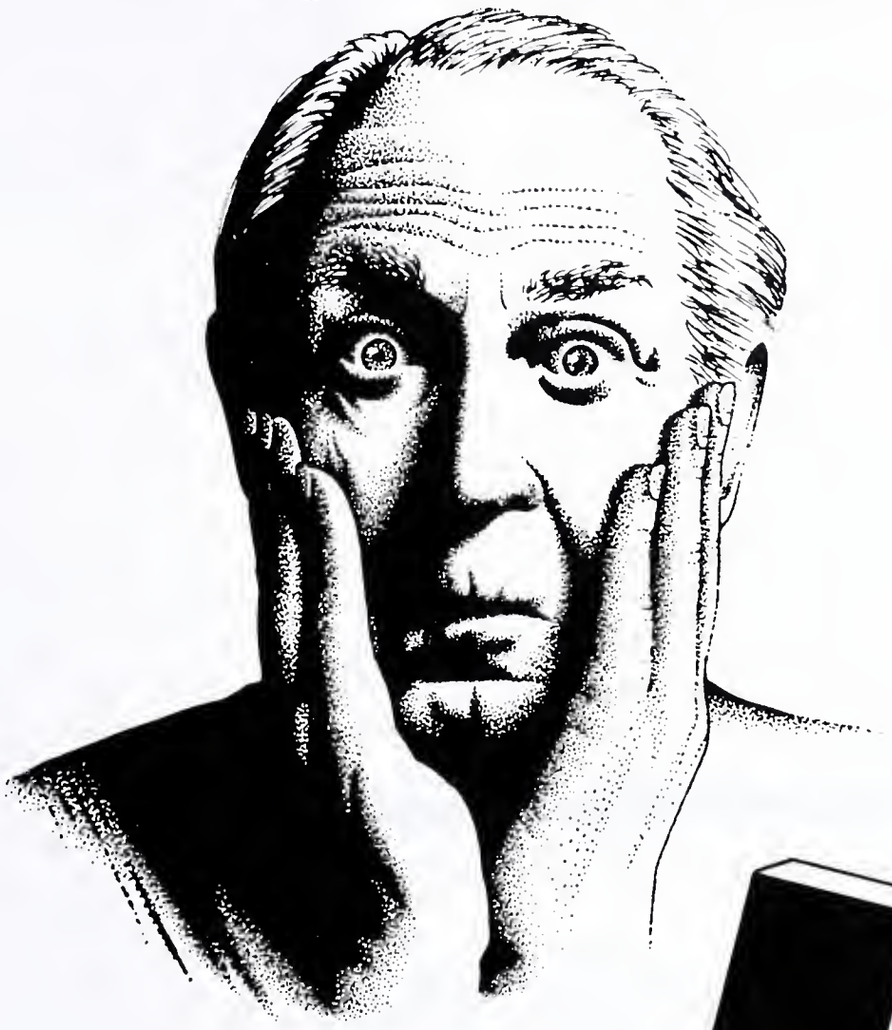
For 1974, Charley-1 had 3,085 calls and transported 2,304 patients for these calls. All these records were obtained for review, except 153 which could not be located (5%). Baker-1 had 2,620 calls and transported 2,019 patients. Baker-1 had 143 call records unavailable for review (5.5%). Even though Baker-1 and Charley-1 are civilian ambulances, some of their calls were for armed forces personnel (percentage not determined) despite the existence of armed forces ambulances for military personnel on Oahu. There was insufficient ambulance report documentation to allow reliable percent determination of military personnel transported, although the overwhelming majority of individuals transported were civilians. Copies of all MICT ambulance paramedic call records are kept on file by the EMS Records Clerk, at the EMS Program's Office, so the initial review was of all 1974 records lumped together of Baker-1 and Charley-1. The combined 1974 Baker-1 and Charley-1 records totaled 5,705, including 296 records (or 5.1%) that were unavailable for review.

For these 5,705 calls, Baker-1 and Charley-1 transported 4,323 patients (the total number of records unavailable on *these* patients is unknown) on an emergency basis to various emergency facilities (Baker-1 and Charley-1 do not usually perform routine patient transfers nor do they transport the deceased; patients pronounced dead at the scene and patients not deemed emergencies are discharged at the scene).

The available records of the 4,323 transported emergency patients of Baker-1 and Charley-1 for 1974 were then screened to ascertain whether or not the patient was transported to Queen's Medical Center (Queen's Medical Center is the largest civilian hospital in the State of Hawaii, having 395 beds in 1974; that year, it was categorized as possessing comprehensive capability for the care of adults and children). Ambulance report forms whose destination was marked *"QMC"* or *"Queen's"* or *left blank* were retained in the study, whereas those forms designated specifically for destinations other than QMC were discarded from the study. For each form retained in the study, a case-by-case subjection to preliminary screening criteria (for high-risk cardiac and high-risk trauma) was performed using the "Preliminary Screening Criteria for High-Risk Cardiacs" and the "Preliminary Screening Criteria for High-Risk Traumatized." These three criteria (QMC destination, screen cardiac, screen trauma) reduced the sample number of 1,001 cases.

The QMC Emergency Room records for each of these 1,001 cases were reviewed. In 29 of the 1,001 cases, the patients were not transported to QMC ER, the patients were direct admissions to the hospital, or the patients had an ER chart that could not be located. The hospital charts for the name and corresponding dates were requested for all 29 of these automatically, revealing six of the 29 being direct admissions to the hospital (usually no QMC ER charts are filled out on these cases). Fourteen of the 29 were felt not to have been transported to QMC ER (these being those cases with ambulance report form destinations left blank, which were followed up on anyway relative to the possibility of being direct admissions.) Nine of the 29 probably had QMC ER charts but they were unavailable for review (nine of 1,001, or 0.9 percent, unlocatable ER charts for review for this study). At this point, 18 of these 29 cases were discarded from the study either because they were not trans-

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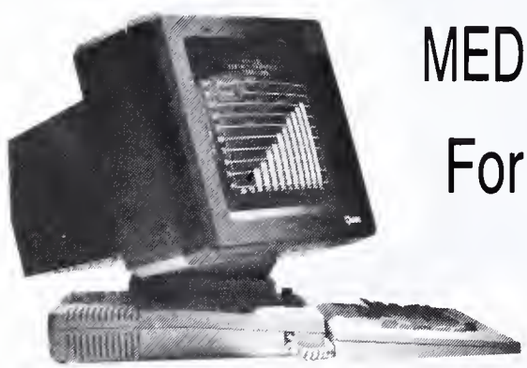
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ported to QMC (14) or because they had neither ER nor hospital charts for followup (4). This reduced the study cohort to 983 cases.

After this, all transfers from QMC ER to another medical, surgical, pediatric, or OB-gyn facility were discarded from the study group. This included transfers to: Tripler Army Medical Center (4), St. Francis Hospital (1), Kaiser (1). The sample size was reduced to 977 cases.

The QMC ER records were evaluated for these remaining 977 cases to note whether the patients were admitted to QMC, expired in the ER, or were discharged from the ER. Three hundred six of the 977 cases were admitted to QMC and 32 of 977 expired in the ER. "High-Risk Cardiac" and "High-Risk Trauma" criteria (according to Appendices I and II) were applied to each of the 32 cases pronounced dead in the emergency room; 31 cases were adjudged high-risk. The remaining one was a terminal cancer patient who did not have a pre-hospital cardiopulmonary arrest. Those cases discharged from the emergency room were not subjected to the criteria as it was felt that: (a) their discharge in all likelihood precluded high-risk status, (b) followup on all would be extremely difficult.

The QMC hospital charts for the 306 patients admitted were reviewed. Of the 306 patients admitted, only six hospital charts were not reviewed (2%). These six cases had to be discarded due to a lack of diagnosis, autopsy results, in-hospital expiration information, and discharge date. The remaining 300 cases were subjected to the "High-Risk Cardiac" and "High-Risk Trauma" criteria (Appendices I and II) to allow completion of the "High-Risk Studies" form.

Autopsy results (if an autopsy was performed) for completion of the High-Risk Studies form were obtained from the QMC charts and through the Office of the Medical Examiner.

Conclusions

Of the emergency patients transported to QMC by Mobile Intensive Care Technician units Baker-1 and Charley-1 in Honolulu, (See Figure 1) between Jan. 1, 1974, and Dec. 31, 1974, 89 satisfied the High-Risk Cardiac criteria (per Appendix 1) and 49 the High-Risk Trauma criteria (per Appendix II). Five persons met both sets of criteria. Survival and mortality numbers and percentages for these High-Risk Cardiac patients and High-Risk Trauma patients are shown in Table 1. Of the 89 High-Risk Cardiac patients, 54% were eventually discharged from the hospital. The overall mortality (by the time of hospital discharge) was 46%, so the overall survival was 54%.

Discussion

To be noted is the lack of computations of mortality/survival by age, sex, medical condition, type of emergency medical care rendered, and pre-hospital



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ambulance response time. The specific biases of the methodology section for the data are listed below.

As none of the Table 1 data could be compared to other studies due to the biases of the methodology section, particularly due to the criteria for High-Risk Cardiacs and High-Risk Traumas, it was decided to select certain types of cases from Table 1 for review.

In reviewing the cardiopulmonary arrest cases (Code 500 — from any cause), it was found that 38 cases were transported to QMC by either the Baker-1 or Charley-1 units. One of the 38 cases was eliminated from review because of in-hospital arrest long after MICT care was terminated, others of the 38 cases were discarded due to unlocatable hospital charts. When the remaining 35 cases of cardiopulmonary arrest were evaluated, 11.4 percent were discharged from the hospital alive. These results are summarized in Table 1. The four overall survivors were saved because of pre-hospital MICT intervention, without any doubt.

Review of the acute myocardial infarction (AMI) and acute subendocardial infarction in Table 1 included 27 cases, of which 78% were discharged from the hospital alive. Of 14 acute coronary insufficiency cases, 14% were discharged alive.

Comparison of the AMI data with the acute coronary insufficiency data suggested that a more reasonable view of acute cardiac infarction could be obtained by combining the data. The support for this is pathological, in that EKG, cardiac enzyme, and cardiac histopathological changes take minutes to hours to develop, and a number of the acute coronary insufficiency deaths in the emergency room probably represented early acute myocardial infarction of insufficient duration to allow the development of diagnostic light microscopy histopathologic changes.

Lumping the acute myocardial infarction, the subendocardial infarction, and the acute coronary insufficiency cases (excluding severe cases for the reasons indicated above) yielded 41 cases, of which 56% were discharged from the hospital. The primary disadvantage of this lumping together is the very likely inclusion of patients with lethal arrhythmias who would have not demonstrated cardiac infarctions had they survived, as has been noted in studies elsewhere. The lumped data are shown in Table 1.

In concluding this report, the following major biases of the study are to be indicated:

- 1974 only.
- Baker-1 and Charley-1 Ambulance Paramedic MICT units only.
- Patients transported.
- Queen's Medical Center.
- Provisional screening criteria (cardiac, trauma).
- High-Risk Cardiac criteria and High-Risk Trauma criteria.
- Deletion of missing cases.
- Selected risk category criteria.
- Lack of separation of MICT from other EMS contributions.

Other results and conclusions should be made only within the recognized limitations of the biases and the methodology as described in the text. The data presented should be compared with that for 1975 and 1976 for all ambulance units before any prediction can be made that these data for 1974 can be extrapolated with validity to the entire Island of Oahu. Certainly, no extrapolation could be made for the entire State of Hawaii from these data. The small sample numbers of High-Risk Cardiac and High-Risk Trauma cases do not allow the placement of much emphasis on the statistical calculations.

ACKNOWLEDGEMENTS

The assistance of the following in performing this study is gratefully acknowledged: Judy Gavin, Thomas Chang MD, Richard Y.K. Wong MD, Barbara Ideta, Nellie Yeda and the QMC Medical Records Department Staff, Mary Ann Conlin, Randolph Wong, Roy Ebisu, Deborah Carlson, Joan Yamaguchi, and Cathy Brown.

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Appendix I
"High-Risk Cardiac" Criteria

- Cardiogenic shock.
- Cardiopulmonary arrest (Code 500).
- Acute myocardial infarction.
- Acute subendocardial infarction.
- Complete heart block (or 3°); Stokes-Adams attack.
- Cardiac pacemaker (implanted) failure or non-capture.

Three days or more of hospitalization for:

- Acute severe pulmonary edema.
- Acute severe coronary insufficiency (decompensated).
- Multiple runs of ventricular tachycardia.
- Acute severe congestive heart failure (CHF).
- Decompensated severe: ASHD, HCVD, organic heart disease, coronary artery disease.
- Acute severe CNS ischemia due to prolonged cardiac arrhythmias.
- Pre-infarction angina.

Significant premature ventricular contractions (PVCs):

- Five per minute or more.
- R on T.
- Coupled.
- Multifocal.
- Bigeminal.
- Three in a row or more (ventricular tachycardia).

Appendix II
"High-Risk Trauma" Criteria

- Cerebral concussion, requiring three days' hospitalization or more.
- Cerebral contusion, moderate, requiring three days' hospitalization or more.
- Basilar skull fracture.
- Cerebral laceration.
- Intracerebral hematoma.
- Depressed skull fracture, excluding only anterior wall of frontal sinus.
- Linear skull fracture, requiring three days' hospitalization or more.
- Epidural hematoma, acute.
- Subdural hematoma, acute.
- Partial or complete brain, brainstem, or cervical spinal cord transection.
- Gunshot wound of brain or cervical spinal cord.
- Cervical spinal fracture, with or without neurological deficit.
- Cervical spinal cord or thoracic spinal cord contusion, laceration, transection, epidural hematoma, subdural hematoma, or intramyelon hemorrhage.
- Tracheal laceration, fracture, crush, or rupture (including thyroid or cricoid cartilages).
- Traumatic pneumothorax.
- Traumatic hemothorax.
- Cardiac tamponade.
- Traumatic pneumo- or hemo-mediastinum.
- Pulmonary contusion.
- Laceration or puncture of heart.
- Laceration or puncture of lung.
- Laceration or puncture of diaphragm.
- Pelvic fracture with pelvic hematoma, intra-abdominal organ damage, or intrapelvic organ damage.
- Laceration, puncture, or transection of:
 spleen
 liver
 gallbladder
 stomach
 duodenum
 pancreas
 kidney
 aorta
 small bowel
 large bowel
 uterus
 bladder
 vena cava
 iliac artery/vein
 renal artery/vein
 brachiocephalic artery/vein
 mesenteric artery/vein (SMA, IMA)
 coeliac artery
 subclavian artery/vein
 carotid artery
 jugular vein
 pulmonary artery/vein
- Traumatic shock (BP < 80/60).
- Burns, second- and/or third-degree, over 30% of body or more.
- Hemoperitoneum, gross blood.

Welcome, Charlotte Beal!

We at HMA have a new staffer aboard — a communications director. She is Charlotte Beal.

The tall, blonde, straight-haired Miss comes from Newport Beach, Calif., and looks it. However, her seven years in Hawaii, and in the sun, also show. She owns a Hobie Cat and sails it, she is a certified scubadiver, and she runs regularly. Although she is not a self-flagellating marathoner — she runs for fun and fitness — she did complete a recent six-mile run.

How did she come into medicine? It started at birth; her mother is an RN.

Public Relations? Director of communications for HMA? How does that fit in with medicine? You forget: That is the "in" thing for doctors nowadays, it seems. Her father is a corporate executive, the president of Carl Instruments Company of California (scientific instruments, including medical). Understandably, she grew up in the milieu of the marketplace, selling, advertising, promoting. That's why she is here.

To complete the family history, she has a younger sister.

From high school, Beal went to UCSD for a year, then transferred to UCLA and graduated in 1976 with a degree in journalism and mass communications. She then got a job as managing editor of a weekly newspaper in the small town of Cambria, Calif., and was in on the reporting of the bombing and storming of the Hearst Castle during those troubled times. The weekly had a circulation of 150,000. That 2½-year stint gave her a lot of exciting experience, much more so than further graduate studies could have done.

A vacation in Hawaii convinced her to stay here. She got a job as communications director for the Hawaii Association of Realtors for a year, then moved on to spend five years with the American Lung Association as public relations specialist and fundraiser. Before joining us at HMA, she spent a year as an associate with Avatar Public Relations and Advertising on an independent contractual basis, such that she had many accounts of her own. The hours were too long and the hassle too exacting, so when she saw HMA's ad, she jumped at the opportunity.

So how does this background tie in with medicine? Traditional physicians shun the marketplace; the view from here is that Beal is purely and simply a business woman on the ladder up to being a female executive!

But wait; there's more to the story of her young life.

She has been in the snake pit of medicine: As admissions clerk in the Emergency Room at UCLA Medical Center, she has seen all the gore and anguish, the triage, the interpersonal relationships in crisis after crisis with which we physicians have all had some experience. She served thus during the night shift, while going to college. She served similarly here at Queen's Medical Center. She has been a ward clerk. She knows the difference between an appendix and a compound fracture of an appendage. She talks our language.

Now we understand her interests; she has gravitated toward health care as her forte. She hopes to help improve it.

Right now, she is all senses, not just "all ears." She is examining HMA's database. We hope she will like us. We hope she will help us make our way through the jungle into which organized medicine has been propelled by powerful societal forces.

Welcome, Charlotte, to HMA.

Hawaii Academy of Family Physicians' Newsletter

Don and Marlies Farrell

Membership News

Seven HAFP members became fellows of the academy during a special ceremony at the Anaheim 1985 AAFP Scientific Assembly. We congratulate Drs. Bernard Chun, Vincent Dang, Robert Hollison, Lloyd Kobayashi, Steven Mohlie, Jeffrey Smith and James Scamahorn. They were among 900 physicians so honored.

Recently elected to Inactive membership were Drs. Joseph Lucas, Ernesto Santos and Edward Underwood. Dr. Joseph Fishel was re-elected to Affiliate membership; congratulations to all!

AAFP 1985 Congress of Delegates and Scientific Assembly

Anaheim was the setting for another successful meeting of AAFP members and their families. The Congress of Delegates as usual had a full schedule and began meeting at 7:30 a.m. in order to complete its business on time. Some of the weightier issues decided by this year's congress include the following: Delegates endorsed the action of the American Board of Family Practice in establishing a Certificate of Added Competency in Geriatrics. This issue was hotly debated both in the reference committee and on the floor. Opponents felt strongly that this was against everything AAFP stood for and would pave the way for further sub-specialization. They also pointed out that FPs already are in the forefront of dealing with elderly patients and said they believe the certificate would be a divisive factor. Proponents were of the opinion that this certificate was an accomplished fact and that support for the ABFP action would ensure that FPs would maintain equality with other specialties espousing the Added Competency Certificate.

Congress also voted to change the bylaw requirements for Active membership beginning in 1989. As proposed last year, beginning in 1989 only those FPs who have completed a three-year residency in family practice will be eligible for Active membership. This provision will be for new members only, anyone holding Active membership at that date will retain it regardless of residency training. While some feared a loss of membership because of these new restrictions, others saw it as an opportunity to recruit now those FPs who will no longer be eligible for Active membership in 1989.

Hawaii's proposed amendment, allowing state chapters to establish their own Life-Exempt membership catagories for certain Life members and free them from any further dues requirement, was defeated. Congress felt that it was not in the best interest of the Academy for state chapters to formulate their own membership categories.

Dr. Richard Inskip was installed as the 1985-86 AAFP president. In his address he proposed among other projects a national multimedia campaign to inform the American public about the specialty of family practice and its practitioners. Dr. Inskip suggested that funding for this campaign come in part from contributions from AAFP membership. Congress endorsed this proposal.

We will report further on the Anaheim meeting in subsequent issues.

HAFP Annual Meeting and Seminar

Plans are complete for the annual meeting, set for Feb. 22 and 23, 1986, at the Hilton Hawaiian Village. The seminar will deal with the topics of orthopedics and rheumatology, in particular as they apply to family practice. We have secured excellent speakers in these fields and are looking forward to another successful meeting. The nominating committee is currently establishing a slate of candidates for the 1986 Executive Council. If you know of a colleague willing to give of his time and expertise to the Academy, or if you are so inclined yourself, please call the HAFP office at 235-3115. And please send in your registration for the meeting early, before it gets lost or forgotten!

Health Fair

HAFP will host an informational booth at the 1986 Health and Fitness Fair at the Neal Blaisdell Center Jan. 24 through 26. We will occupy booth No. 71 and man- or womanpower is needed to staff the booth during the fair. Please say yes when you are contacted.

Happy holidays to you and yours!

HMA Auxiliary

National Recognition for HMA Auxiliary

The HMA Auxiliary literally ran away with the awards at the Annual American Medical Association Auxiliary Convention in Chicago, June 16-29. The auxiliary received *six* awards in three categories. For AMA-ERF, one award was given for the significant increase in dollar contributions over the last year. Two awards were presented for the auxiliary newsletter, Kauka no Kokua (Doctor's Help). And, in the area of membership, the auxiliary received three awards: for placing second in the nation for greatest numerical and percentage increase, and for the greatest AMA Auxiliary membership increase in the western area.

37th Annual Session

The 1985 Annual Session of the Hawaii Medical Association Auxiliary is scheduled for Dec. 12 at the Kahala Hilton Hotel. The theme will be "Holiday Potpourri," featuring sights, scents and sounds of the holiday season.

Special guest at this 37th Annual Session will be the newly installed national American Medical Association Auxiliary president, Mary Kay McPhee. She will address the topic "The Physician's Image Today: The Role of the Auxiliary," and will install the 1986 officers.

Financial and Survival Planning Manuals

Available from the HMA Auxiliary are Financial and Survival Planning Manuals. Originally developed by the California Medical Association, the manuals have been adapted to adhere to Hawaii's laws. The manuals help physicians and their families anticipate the needs of survivors in dealing with the innumerable details involved in settling an estate. These are available through the Auxiliary for our members at $5 each.

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Address of the President — Joseph F. Boyle, MD

Two years ago — give or take a few days — I came to this microphone to thank this House for your confidence in electing me to the most honored position in all of the world of medicine. Today, in my last formal opportunity to address you, again I thank you. I can report to you that holding the office of president of the American Medical Association is indeed an honor beyond description. The warmth with which I have been received, the respect proferred, the honors bestowed transcend anything that I as an individual could ever rightfully expect — indeed anything I anticipated. Again, I thank you!

This has been an extraordinary year. An experience that cannot be described, a trip that has given me a new pride in our membership, a new sense of the strengths and integrity of American physicians. Though we hear the occasional grumble, the passionate vent of ire when some especially sensitive nerve is struck, the carefully composed complaint about or plea for relief from real or perceived injustice — the membership believes in the AMA, has faith in the AMA, supports the AMA and looks to the AMA for leadership.

We. have the opportunity to provide that leadership. Let us briefly address a few of those opportunities:

1—The continued strength and vitality of the organization translate that into dues.

2—Renewed accountability for professional standards, utilization of medical services and physicians' charges.

3—*Our* responsibilities in medical liability.

4—A restoration of the public's confidence in a profession that cares.

1—DUES

Addressing the Leadership Conference in February 1983, I posed a question: Do we have a federation of American Medicine with the credibility, strength and will to lead in these times of incredibly tumultuous change? I asked those present, and ask you now, to look back at the AMA in 1974: Liquid assets, almost zero; equity in the association, $12 million; budget, $30 million; borrowing, $1.0 million/month to meet the payroll; a declining disenchanted membership; a political pygmy, a fiscal runt, a fragmented profession in almost total disarray.

Compare that with today: Membership steadily increasing, fiscally sound, politically potent; recognized as the most influential force in national health policy; in scientific publications, No. 1 in the world; I will not recite the entire litany. Suffice it to say: "When AMA speaks, people listen."

In the early 1970s, the board, with the concurrence of the House, sought to maintain barely adequate programming with bare bones resources. The results were disastrous, nearly fatal. In today's challenging environment, if we are to remain No. 1, we need new and aggressive programs — not retrenchment — and we will need to commit the resources to do so.

2—ACCOUNTABILITY

Among the challenges we must meet, there are two in my view that must stand high on the agenda: (a) Accountability for professional standards and practice, and (b) responsibility for professional performance.

In the gemstone of excellence in medicine, the foundation for progress in clinical medical science, the very essence of personal, individualized medical care involves the freedom of physicians to exercise independent professional judgment in the management of individual patient problems and for the patient to have the confidence that such judgments are sound and are exercised in their best interests. Over this past decade, the nation's intense concentration upon the cost of medical care has, in turn, sharply focused on well-documented geographic variations in the utilization of medical services. These variations in patterns of practice now seriously threaten both independence of professional judgment and patient confidence. That widespread inter- and intra-regional disparities exist is beyond question. Hospital admission rates and lengths of stay in many regions differ by up to 50 percent. Utilization rates for some surgical procedures and medical services range even more widely in demographically indistinguishable communities.

In Report AA, adopted by the House last December, the Board of Trustees noted that in a field as diverse as medicine, some variations are to be expected and, in fact, may be necessary to ensure an individualized approach to medical care. Some may reflect diversity in patient needs and preferences; some may be due to the availability of resources as new technologies and techniques emerge. Some are due to as yet unresolved differences in medical opinion or professional judgment. Unfortunately, some may actually indicate inappropriate utilization of services.

Those variations in patterns of medical practice have received wide readership and public debate. As might be expected, some policy planners in government and in private health care coalitions view all of these variations as excess utilization. They have taken small bits of data from very small studies and extrapolated the results into a variety of troublesome ideas such as national savings of many billions of dollars. They have spawned the notion that DRG reimbursements can be averaged nationwide. The extrapolations have stimulated many irrational and unreasonable demands inserted into PRO contracts. They threaten to reduce provision of medical care to the least common denominator in which the quality will be lessened, all future medical innovation stifled and freedom to exercise professional judgment potentially lost forever.

Assuring accountability for professional standards and professional performance constitutes a natural extension of our century-and-a-half commitment to the betterment of public health. Addressing the elimination of inappropriate provision of services must then stand among our highest priorities. To accomplish this, the Board of Trustees has approved a 20-step action plan, including the development and dissemination of model action protocols for medical society and hospital medical staffs, demonstration projects, assessment of data availability and needs, a research agenda to analyze patterns of practice and the effectiveness of physician peer review, and serving as a clearinghouse for a federation network of physician initiatives. We hope that delegates to this House will assume the leadership to assure that your societies accept this as a matter of urgent business.

3—RESPONSIBILITIES

Concurrently, we need to direct our attention to another issue of major public concern — physician charges and incomes. We live in an era of paradoxes wherein the public seems blithely to accept multimillion-dollar contracts for athletes, and average incomes for some sports stars of $150,000 and more per year. They applaud news commentators earning $500,000 to more than $1 million, while they queston the appropriateness of pediatricians' earnings of just 1½ times that of trash collectors in San Francisco, for example, and family practitioners making just slightly more than the deckhands manning oil tankers. We are proud of American physicians who, this last year, voluntarily restrained their fees to the extent that they saved their patients more than $3 billion. We are not at all embarrassed about the incomes of most American doctors; but we are concerned that there are a few whose charges — and incomes — are outrageous.

As we look to our patients and the general public for support, as we seek equity under Medicare or support in relief in our current professional liability crisis, it is best that we, as medical associations, invite the public to join us.

We must seek the means to exercise increased professional discipline and serve as true patient advocates in correcting these physician excessess before they

destroy us all.

A further area of association responsibility demands our immediate attention — professional liability.

After almost nine years of relative calm there is no question but that today we do have an ever-expanding crisis in medical liability. Trial attorneys have unleashed an increasingly strident diatribe against medicine and the insurance industry to divert public attention away from the nature and extent of the problem. Indeed, premiums for some specialists range up to $2,000 per week, with suits being filed against one of six physicians each year, one of three obstetricians, with annual losses at $2 billion and more. In the face of these figures, even the American Trial Lawyers Association's most reckless rhetoric cannot obscure the fact that a crisis does indeed exist. In addition, when one considers that fully 75% of all claims are closed with no indemnity paid and that defendants continue to prevail in 70 percent of all cases carried through trial, it becomes apparent that *what was intended as a system to compensate those truly injured by real malpractice or neglect is being converted into a medical compensation system for all who are disappointed when expectations for a perfect result, or perfect baby, or a miracle from modern medical technology cannot be achieved.* It is also abundantly clear that it is impossible to squeeze such a compensation system for 230 million Americans through the offices of 400,000 practicing physicians. We also note that while the American Trial Lawyers Association hisses and snarls about maintaining a system of fairness and equity and when truly injured persons receive no more than 30 percent of the premium dollars expended, then *that* system can hardly be viewed as either fair or equitable.

You have received three reports from our Special Task Force on Professional Liability, the last of which identifies a comprehensive list of remedies which we intend to pursue, including the introduction of federal legislation to provide incentives for states to enact those tort reform measures that *have* been demonstrated to produce real savings in losses and premiums.

The task force also identified a number of opportunities for our profession to demonstrate our willingness to accept responsibility in order to provide greater protection for those who entrust their lives and well-being to us — our patients.

The task force observed that "there is no evidence that the increase in the number of professional liability claims and the severity of awards are related to a decline in the quality of care and skill of country. . . . The evidence is that the quality of care and skill of physicians have never been higher." And, "medicine requires the making of numerous difficult judgment calls, often in a very short period of time. Mistakes in judgment are made even by good physicians. . . . But negligence does occur and effective risk management and peer review can reduce it." One might note that with 40 million patients hospitalized and more than 1 billion patient/medical encounters each year, human frailty dictates that accidents can and will occur.

Nevertheless, in this past six months alone, headlines from coast to coast detailed at least three truly devastating tragedies that absolutely should not have occurred. Each physician can play a role in easing the liability crisis by participating in risk management. Our professional associations can contribute by seeking and obtaining greater authority to exercise effective peer review to identify, and either rehabilitate or root out, the incompetent, the negligent and the impaired among our colleagues. If we are to meet the public's expectations, and merit its support, we can do no less.

4—CARING

Finally, one last word about caring. Last June, I set as one goal for my year as your president: A reawakening of professional pride and commitment as a profession that *cares* for people and serves as advocate for its patients. As I reported to you in December, I was gratified by the response I received to that message. It continues to come in. I have now received more than 20 inaugural addresses sent to me by incoming medical association presidents similar to the one by a state president that came in to me the 30th of May.

A few brief quotes from this sum up a message with which we agree: "Medicine is not practiced for governments, nor insurance companies, HMOs, PPOs, IPAs, nor for that matter for doctors. Medicine is practiced for people. . . . The physician serves as advocate for the patient. . . . Advocacy is not easy. . . . Advocacy is not always popular. . . . Advocacy is often difficult. . . . Advocacy *is* personal when patients reach out for solace; whether in fear or insecurity or grief, they reach for their physician's hand; they must not reach in vain."

I have tried from time to time to capture in a few words the essence of what "caring" is all about, this thing we call a patient-doctor relationship. Perhaps an anecdote from early in my medical career will help. In the late 1950s I was asked to see the daughter of a well-known internist in Los Angeles: A beautiful child, beautiful beyond description, and with a sensitivity and compassion that would grab your heart. At the age of 16, she was second in her class at UCLA, an accomplished concert pianist, a published poetess — and she was dying of a malignancy diffusely infiltrating both lungs, with pericardial and epicardial implants.





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Her father could not believe that this darling of his life was ill, much less dying, although her mother did understand. About 3:30 one morning, as I finished doing a pericardiocentesis to relieve her tamponade, she looked up at me and said, "I am dying am I not, Dr. Joe?" I said, "Yes, Julia, you are," and she said, "There is nothing you can do about that is there, Dr. Joe?" I said, "No, Julia, there is not." Then she said, "Will you do me a favor? The next time this happens please help me make Daddy understand, let me say goodbye to Mommy and then let me go."

Perhaps today we could cure Julia and probably could be more help to both her father and her mother; but no matter. She will live forever in our hearts, in a system that cares. Our profession, and the quality of care we can offer and give to our patients, will have a future — if we care!

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Kahuna Lapa'au

"Hey you, Keoki! Go see who comin' up da path an' makin' all da noise!" The kahuna was taking his ease on a two-foot-high pile of layered soft tapa behind a lauhala screen.

Keoki, the medical apprentice, had no choice but to get up from his heavenly dream snooze on the bare dirt floor in the corner, and do his august teacher's bidding. Pretty soon, he came back and reported.

"Master! Get one wahine she cryin' too much. She no can talk. She scared come on top da heiau. Kapu for wahine, you know."

"OK! OK! No teach me about my heiau! I comin'." The old man groaned as his joints creaked. As he descended the steps of the sacred platform of stones he was aware of the middle-aged woman, obviously beside herself with grief. He also noticed that her unwillingness to approach could not prevail against her friends or relatives, who were holding on to her forcibly.

"Whassamata you peepul? Let da wahine go," he commanded.

This they did, in some awe of the temple and the priest. Once released, the wailing woman threw herself down at the kahuna's feet. He drew off his finely woven tapa shoulder piece, covered her sob-wracked form with it and quieted her with a gnarled and veined hand on her disheveled tresses. He addressed the closest, a burly warrior.

"What kine trouble she get?"

"Dis my sister, O great one sir. She bin lose her kane. He bin make one time quick. Get sick on'y five days — da haole kine sick. We nevah know he dat sick!"

"Ah so. . . ." The medical kahuna's sympathy was manifest as he sat down and cradled the woman's head in the crook of his elbow. "But why you drag 'um ovah heah? She no like come, maybe."

"We like fo' you geevum strong medicine — so she no cry allsame," spoke the brother.

"Nah! Nah!" The medical priest shook his head slowly. "Da bes' medicine fo' grief — you know what da mos' bestus medicine fo' dis? No geevum da kine 'tranquilizer.' Dat on'y goin' mak'um allsame no mo' brain — maybe jus' like pupule. Let'um cry! Let'um da blouse go loose! Grieving not goin' hurt nobody. Dis poor woman's auwe is fo' da spirit of her lost husband to hear. Go! Give her comfort. I not goin' give pills."

MORAL: It is always "the others" who panic and say: "Do something, Doc!"

Glossary

tapa = made from the bark of the wauke or mulberry
lauhala = leaves of the pandanus tree
heiau = temple
kapu = forbidden
kane = husband; man
make = died; dead
pupule = crazy
auwe = lament

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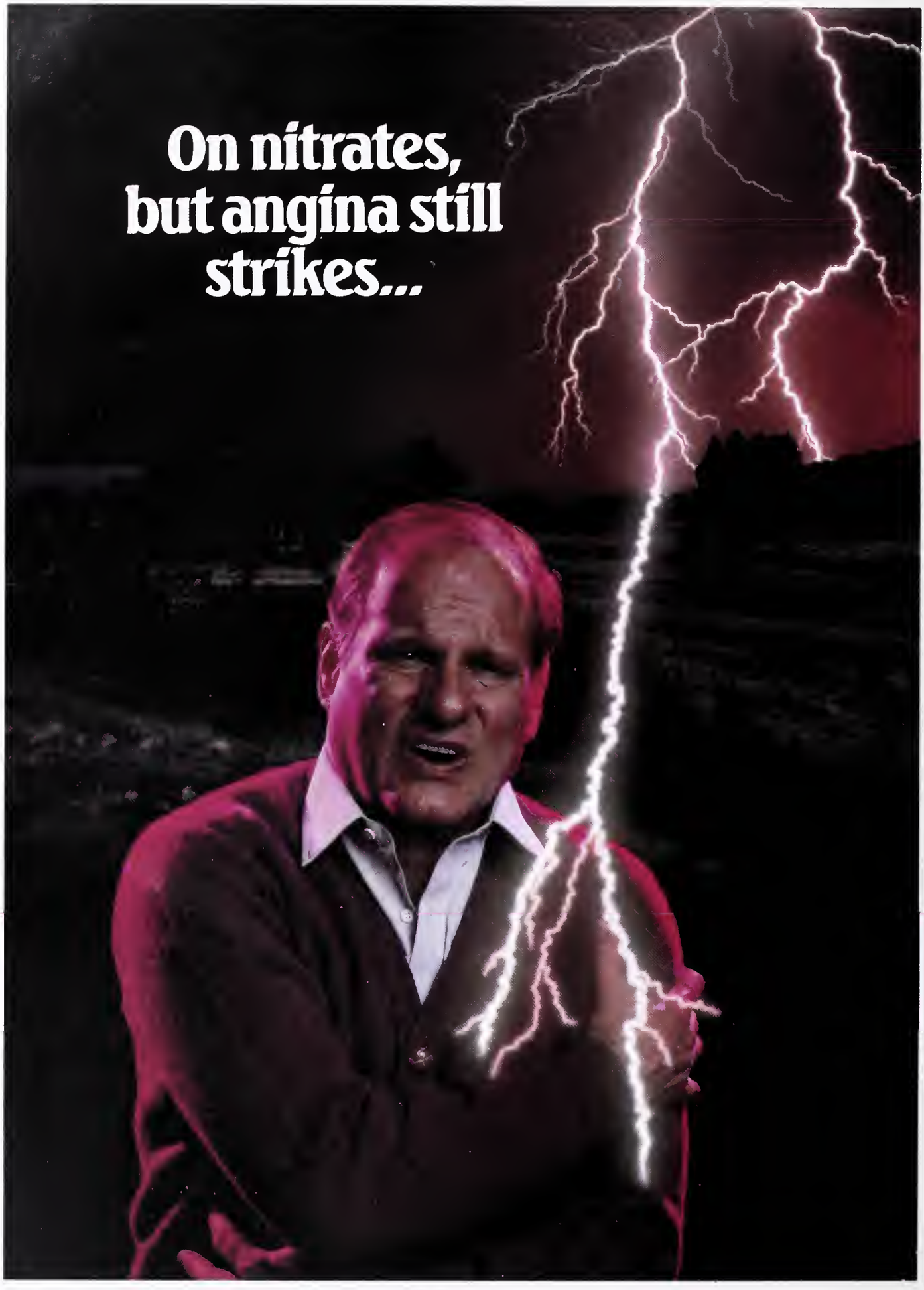
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Cardiovascular contraindications to the use of Isoptin are similar to those of beta blockers: severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (if no artificial pacemaker is present) and second- or third-degree AV block.

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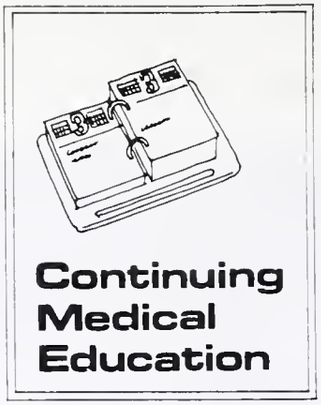
Please see brief summary on following page

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Contraindications: Severe left ventricular dysfunction (see *Warnings),* hypotension (systolic pressure < 90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), 2nd- or 3rd-degree AV block. **Warnings:** ISOPTIN should be avoided in patients with severe left ventricular dysfunction (e.g., ejection fraction < 30% or moderate to severe symptoms of cardiac failure) and in patients with any degree of ventricular dysfunction if they are receiving a beta blocker. (See *Precautions.)* Patients with milder ventricular dysfunction should, if possible, be controlled with optimum doses of digitalis and/or diuretics before ISOPTIN is used. (Note interactions with digoxin under *Precautions.*) ISOPTIN may occasionally produce hypotension (usually asymptomatic, orthostatic, mild and controlled by decrease in ISOPTIN dose). Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Such elevations may disappear even with continued treatment; however, four cases of hepatocellular injury by verapamil have been proven by rechallenge. Periodic monitoring of liver function is prudent during verapamil therapy. Patients with atrial flutter or fibrillation and an accessory AV pathway (e.g. W-P-W or L-G-L syndromes) may develop increased antegrade conduction across the aberrant pathway bypassing the AV node, producing a very rapid ventricular response after receiving ISOPTIN (or digitalis). Treatment is usually D.C.-cardioversion, which has been used safely and effectively after ISOPTIN. Because of verapamil's effect on AV conduction and the SA node, 1° AV block and transient bradycardia may occur. High grade block, however, has been infrequently observed. Marked 1° or progressive 2° or 3° AV block requires a dosage reduction or, rarely, discontinuation and institution of appropriate therapy depending upon the clinical situation. Patients with hypertrophic cardiomyopathy (IHSS) received verapamil in doses up to 720 mg/day. It must be appreciated that this group of patients had a serious disease with a high mortality rate and that most were refractory or intolerant to propranolol. A variety of serious adverse effects were seen in this group of patients including sinus bradycardia, 2° AV block, sinus arrest, pulmonary edema and/or severe hypotension. Most adverse effects responded well to dose reduction and only rarely was verapamil discontinued. **Precautions:** ISOPTIN should be given cautiously to patients with impaired hepatic function (in severe dysfunction use about 30% of the normal dose) or impaired renal function, and patients should be monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects. Studies in a small number of patients suggest that concomitant use of ISOPTIN and beta blockers may be beneficial in patients with chronic stable angina. Combined therapy can also have adverse effects on cardiac function. Therefore, until further studies are completed, ISOPTIN should be used alone, if possible. If combined therapy is used, close surveillance of vital signs and clinical status should be carried out. Combined therapy with ISOPTIN and propranolol should usually be avoided in patients with AV conduction abnormalities and/or depressed left ventricular function. Chronic ISOPTIN treatment increases serum digoxin levels by 50% to 70% during the first week of therapy, which can result in digitalis toxicity. The digoxin dose should be reduced when ISOPTIN is given, and the patients should be carefully monitored to avoid over- or under-digitalization. ISOPTIN may have an additive effect on lowering blood pressure in patients receiving oral antihypertensive agents. Disopyramide should not be given within 48 hours before or 24 hours after ISOPTIN administration. Until further data are obtained, combined ISOPTIN and quinidine therapy in patients with hypertrophic cardiomyopathy should probably be avoided, since significant hypotension may result. Clinical experience with the concomitant use of ISOPTIN and short- and long-acting nitrates suggest beneficial interaction without undesirable drug interactions. Adequate animal carcinogenicity studies have not been performed. One study in rats did not suggest a tumorigenic potential, and verapamil was not mutagenic in the Ames test. *Pregnancy Category C*: There are no adequate and well-controlled studies in pregnant women. This drug should be used during pregnancy, labor and delivery only if clearly needed. It is not known whether verapamil is excreted in breast milk; therefore, nursing should be discontinued during ISOPTIN use. **Adverse Reactions:** Hypotension (2.9%), peripheral edema (1.7%), AV block: 3rd degree (0.8%), bradycardia: HR < 50/min (1.1%), CHF or pulmonary edema (0.9%), dizziness (3.6%), headache (1.8%), fatigue (1.1%), constipation (6.3%), nausea (1.6%), elevations of liver enzymes have been reported. (See *Warnings.*) The following reactions, reported in less than 0.5%, occurred under circumstances where a causal relationship is not certain: ecchymosis, bruising, gynecomastia, psychotic symptoms, confusion, paresthesia, insomnia, somnolence, equilibrium disorder, blurred vision, syncope, muscle cramp, shakiness, claudication, hair loss, macules, spotty menstruation. **How Supplied:** ISOPTIN (verapamil HCl) is supplied in round, scored, film-coated tablets containing either 80 mg or 120 mg of verapamil hydrochloride and embossed with "ISOPTIN 80" or "ISOPTIN 120" on one side and with "KNOLL" on the reverse side. Revised August, 1984. 2385

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Continuing Medical Education

CALENDAR OF ACCREDITED EVENTS—CATEGORY 1

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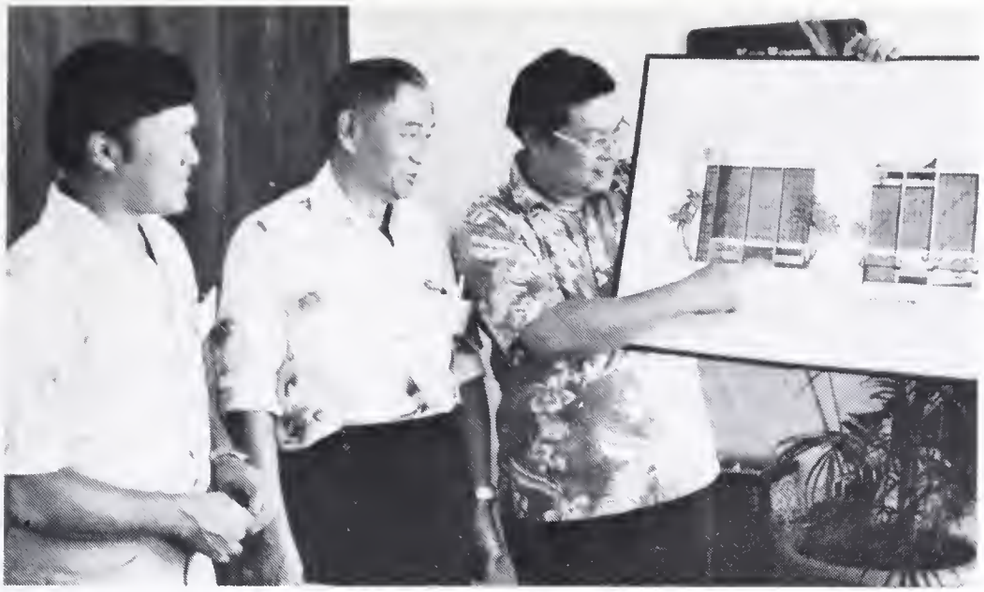
LOCAL ACCREDITED PROGRAMS
ONGOING

For a complete list of ongoing programs, please refer to the September 1985 edition of the HAWAII MEDICAL JOURNAL. Further information is available through the individual institutions or through the HMA's CME Department.

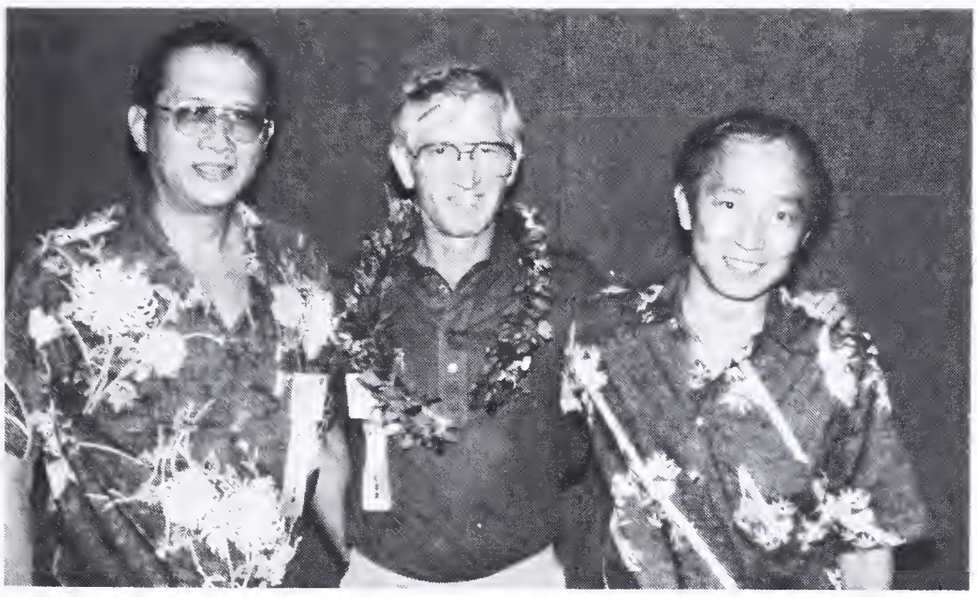
SPECIAL EVENTS

All special events should be confirmed with the CME program sponsors, as cancellations are not necessarily reported to the HAWAII MEDICAL JOURNAL.

Dec. 26-30, 1985	Allergy, Drugs and Drug Allergies, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 1-4, 1986	Rheumatology and Immunology, Symposium Maui, Inc., P.O. Box 10185, Lahaina, Hawaii 96761, Dr. Joe Harrison, (808) 879-8182 or 661-8032. Location: Royal Lahaina Hotel, Kaanapali, Maui.
Jan. 13-17, 1986	Pan Pacific Surgical Association, Charlotte Winget, P.O. Box 553, Honolulu, Hawaii 96809, (808) 523-8978. Location: Sheraton Waikiki.
Jan. 18-25, 1986	Seventh Annual Royal Hawaiian Eye Meeting, Chuck Williams, Hawaiian Eye Foundation, 1600 Ala Moana, #1902, Honolulu, Hawaii 96815, (808) 955-1708. Location: Royal Lahaina Hotel, Maui.
Jan. 27-31, 1986	Fourth Annual Hawaii Conference on Gastrointestinal and Hepatic Diseases, Hawaii Medical Association, Gary Glober, MD, 1380 Lusitana St., #701, Honolulu, Hawaii 96813, (808) 536-1021. Location: Mauna Kea Beach Hotel, Big Island.
Feb. 4-7, 1986	Cardiology Update, Institute for Medical Studies, 30131 Town Center Dr., Suite 215, Laguna Niguel, Calif. 92677, (714) 495-4499. Location: Honolulu.
Feb. 17-21, 1986	Geriatric Medicine in Practice — 1986: Workshops with Experts, co-sponsored by Kuakini Geriatric Center, Pacific Geriatric Education Center, Location: Hawaiian Regent Hotel.



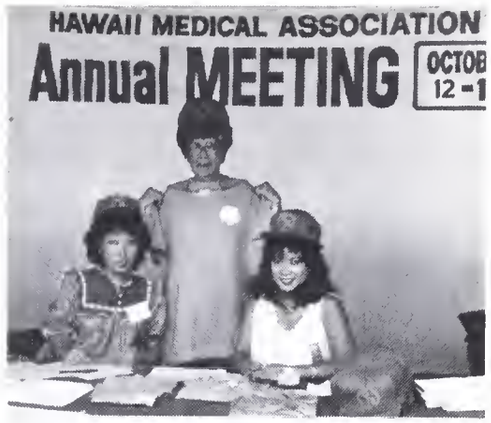
From left, Nelson Jones, Herbert Chinn, MD, and Jon Won review plans for HMA's new building.



From left, President-elect Walter Chang, MD, President Russell Stodd, MD, and Treasurer Allan Kunimoto, MD, band together for a year of hard work and much success!



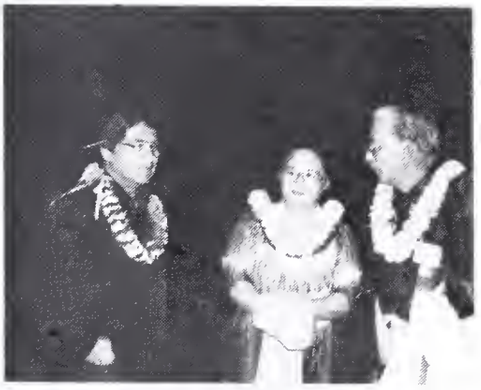
Auxiliary members sponsored activities, sold a variety of Big Island delights, and hosted an "early risers" seminar on financial planning. Heading up this enthusiastic team were, from left, Kathy Oldfather, Carol Berk, JoAnn Lundberg, and Lila Johnson.



HMA staffers, from left, Cheryl Sugita, Pat Kawamoto, and Jennilyn Etrata made registering a joy.



Congratulations and kudos to Steven Moser, MD — William Hindle, MD, left, presents Dr. Moser with the 1985 Physician of the Year award.

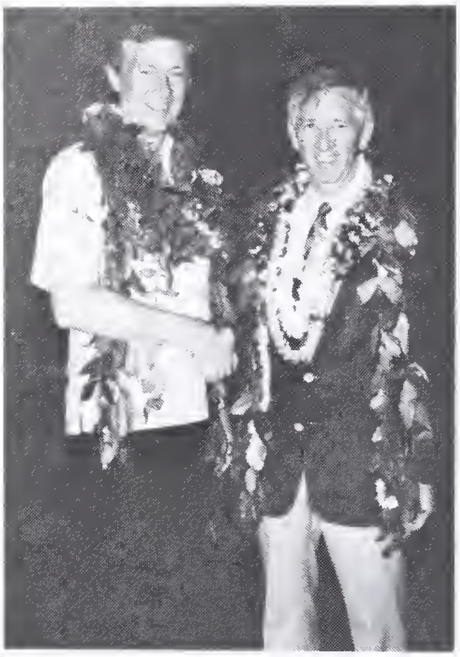


U.S. Rep. Daniel Akaka, left, chats with Dr. Sakae and Mrs. Fumiko Uehara at the Banquet Luau.



William Hindle, MD, center, congratulates Media Award winners Leslie Wilcox, left, and Pat Pitzer.

Maui Physician Named HMA President



Immediate Past President William Hindle, MD, left, turns over the reins of HMA's leadership to Russell Stodd, MD.

Maui ophthalmologist Dr. Russell Stodd was installed as HMA President at the association's Annual Meeting in Kona.

Dr. Stodd has been actively involved in medical association affairs since 1974 and served as president of the Maui County Medical Society in 1978. Currently, he is in private practice in Kahului, and recently opened Aloha Eye Clinic with associate Dr. Don Griffith.

Dr. Stodd is also chief of staff at Maui Memorial Hospital, is a fellow of the American Academy of Ophthalmology, vice president of Pacific Coast Oto-Ophthalmology, and is a member of the Hawaii Ophthalmology Society.

He received his medical degree from the University of Oregon Medical School, completed his internship at Los Angeles County Hospital, and his residency in ophthalmology at Gorgas Hospital in the Panama Canal Zone.

Other officers are: Walter W.Y. Chang, MD, President-elect; Allan R. Kunimoto, MD, Treasurer; Calvin C.M. Kam, MD, AMA Delegate; Walter W.Y. Chang, MD, Alternate AMA Delegate; Milton H. Howell, MD, Speaker of the House; Peter M. Kim, MD, Vice Speaker of the House; Ernest L. Bade, MD, Councilor from Hawaii; H.H. Chun, MD, Councilor from Honolulu; Kenneal Chun, MD, Councilor from Honolulu; Philip Hellreich, MD, Councilor from Honolulu; Russell Hicks, MD, Councilor from Honolulu; Charles Yamashiro, MD, Councilor from Honolulu; Gladys Fryer, MD, Councilor from Honolulu; Denis J. Fu, MD, Councilor from Maui; Minolu Cheng, MD, Councilor from West Hawaii; Peter McNally, MD, Resident Physician Delegate to House; May Okihiro, Medical Student Delegate to House.

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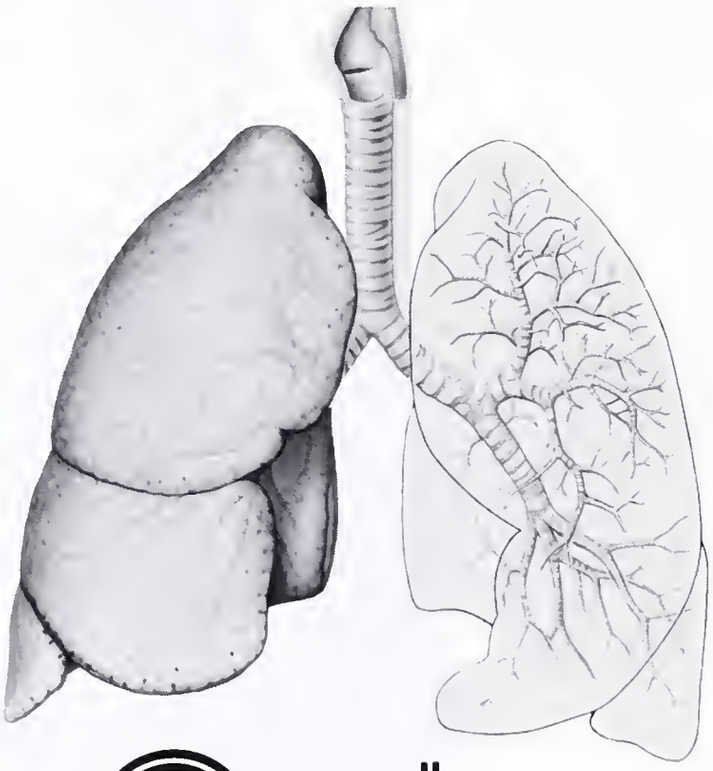
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Appropriate culture and susceptibility studies should be performed to determine susceptibility of the causative organism to Ceclor

Contraindication Ceclor is contraindicated in patients with known allergy to the cephalosporin group of antibiotics

Warnings IN PENICILLIN-SENSITIVE PATIENTS, CEPHALOSPORIN ANTIBIDTICS SHOULD BE ADMINISTERED CAUTIOUSLY THERE IS CLINICAL AND LABDRATDRY EVIDENCE OF PARTIAL CRDSS-ALLERGENICITY OF THE PENICILLINS AND THE CEPHALDSPDRINS, AND THERE ARE INSTANCES IN WHICH PATIENTS HAVE HAD REACTIONS, INCLUDING ANAPHYLAXIS, TO BDTH DRUG CLASSES

Antibiotics, including Ceclor, should be administered cautiously to any patient who has demonstrated some form of allergy particularly to drugs

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics (including macrolides, semisynthetic penicillins, and cephalosporins), therefore, it is important to consider its diagnosis in patients who develop diarrhea in association with the use of antibiotics Such colitis may range in severity from mild to life-threatening

Treatment with broad-spectrum antibiotics alters the normal flora of the colon and may permit overgrowth of clostridia Studies indicate that a toxin produced by *Clostridium difficile* is one primary cause of antibiotic-associated colitis

Mild cases of pseudomembranous colitis usually respond to drug discontinuance alone In moderate to severe cases, management should include sigmoidoscopy, appropriate bacteriologic studies, and fluid, electrolyte, and protein supplementation When the colitis does not improve after the drug has been discontinued, or when it is severe, oral vancomycin is the drug of choice for antibiotic-associated pseudomembranous colitis produced by *C. difficile* Other causes of colitis should be ruled out

Precautions *General Precautions* — If an allergic reaction to Ceclor® (cefaclor, Lilly) occurs, the drug should be discontinued and, if necessary, the patient should be treated with appropriate agents, e.g., pressor amines, antihistamines, or corticosteroids

Prolonged use of Ceclor may result in the overgrowth of nonsusceptible organisms Careful observation of the patient is essential If superinfection occurs during therapy, appropriate measures should be taken

Positive direct Coombs' tests have been reported during treatment with the cephalosporin antibiotics In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs' testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs' test may be due to the drug

Ceclor should be administered with caution in the presence of markedly impaired renal function Under such conditions careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended

As a result of administration of Ceclor, a false-positive reaction for glucose in the urine may occur This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly)

Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis

Usage in Pregnancy — Pregnancy Category B — Reproduction studies have been performed in mice and rats at doses up to 12 times the human dose and in ferrets given three times the maximum human dose and have revealed no evidence of impaired fertility or harm to the fetus due to Ceclor There are, however, no adequate and well-controlled studies in pregnant women Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed

Nursing Mothers — Small amounts of Ceclor® (cefaclor, Lilly) have been detected in mother's milk following administration of single 500-mg doses Average levels were 0 18, 0 20, 0 21, and 0 16 mcg/ml at two, three, four, and five hours respectively Trace amounts were detected at one hour The effect on nursing infants is not known Caution should be exercised when Ceclor is administered to a nursing woman

Usage in Children — Safety and effectiveness of this product for use in infants less than one month of age have not been established

Adverse Reactions Adverse effects considered related to therapy with Ceclor are uncommon and are listed below

Gastrointestinal symptoms occur in about 2 5 percent of patients and include diarrhea (1 in 70)

Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment Nausea and vomiting have been reported rarely

Hypersensitivity reactions have been reported in about 1 5 percent of patients and include morbilliform eruptions (1 in 100) Pruritus, urticaria, and positive Coombs' tests each occur in less than 1 in 200 patients Cases of serum-sickness-like reactions (erythema multiforme or the above skin manifestations accompanied by arthritis/arthralgia and, frequently, fever) have been reported These reactions are apparently due to hypersensitivity and have usually occurred during or following a second course of therapy with Ceclor Such reactions have been reported more frequently in children than in adults Signs and symptoms usually occur a few days after initiation of therapy and subside within a few days after cessation of therapy No serious sequelae have been reported Antihistamines and corticosteroids appear to enhance resolution of the syndrome

Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy

Other effects considered related to therapy included eosinophilia (1 in 50 patients) and genital pruritus or vaginitis (less than 1 in 100 patients)

Causal Relationship Uncertain — Transitory abnormalities in clinical laboratory test results have been reported Although they were of uncertain etiology, they are listed below to serve as alerting information for the physician

Hepatic — Slight elevations in SGDT, SGPT, or alkaline phosphatase values (1 in 40)

Hematopoietic — Transient fluctuations in leukocyte count, predominantly lymphocytosis occurring in infants and young children (1 in 40)

Renal — Slight elevations in BUN or serum creatinine (less than 1 in 500) or abnormal urinalysis (less than 1 in 200)

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Note Ceclor® (cefaclor, Lilly) is contraindicated in patients with known allergy to the cephalosporins and should be given cautiously to penicillin-allergic patients

Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever See prescribing information

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